

THE AMERICAN CATHOLIC QUARTERLY REVIEW

"Contributors to the QUARTERLY will be allowed all proper freedom in the expression of their thoughts outside the domain of defined doctrines, the REVIEW not holding itself responsible for the individual opinions of its contributors."

(Extract from Salutory, July, 1890.)

VOL. XLIV.—JANUARY, 1919—NO. 173

SPANISH LITERATURE OF THE GOLDEN AGE

PROPERLY to approach a study of the literature of Spain in the sixteenth century it is necessary to take a brief glance at the periods which preceded it, and to give some slight consideration to the impulses and forces which helped to mould this most beautiful and stately of all languages. Engrossing as it is to trace the history of a people, it is of equal if not more enticing interest to study the history of a language, to note its source, its growth and the various influences which helped it onward to its goal as the living tongue of a nation.

The origin of the Spanish language, grave and elegant son of the Latin, is lost somewhere in the obscurity of the early ages. If any species of the Castilian tongue was used under the Visigoth kings, no traces of it have come down to us. All laws and chronicles of that time were inscribed in Latin, though it is reasonably certain that the vulgar tongue was in use, especially among the common people. The very earliest existing specimen of Castilian is to be found in the Charter of Aviles, granted in 1155, more than four centuries after the Moorish invasion. To what extent the Spanish language is indebted to the Oriental and Arabic influences writers of many lands have never been able quite to determine, but all seem to agree that much of the beauty and grandiloquence of the language may be attributed to the close relations which existed for so many hundreds of years between the conquered and the conquerors. Though never entirely laying aside their national hostilities, they yet, to a great extent, fraternized between wars and battles, as is the way with human nature; and the Arabic tongue, cultivated and

adapted to poetry and eloquence according to the laws of Oriental taste, early acquired a superiority over the barbarous Romance, or dialect of the Christians, which was still unformed and rude. The conquered Christians in the provinces under Moorish rule soon forgot their own tongue and became so used to the Arabic that, according to the testimony of the Bishop of Cordova in the ninth century, out of a thousand Christians scarcely one was to be found who could say his prayers in Latin, while many could express themselves with elegance in Arabic, and could even compose Arabic verse. It is conceivable that this journey into Arabic must have left some traces on the language and literature of a later day.

But the Christians who had managed to keep their independence descended from the mountains of Asturias and began to repel the invader. In proportion as they extended their conquests a wider field was opened for the old Spanish tongue. This field was gradually extended, and with the decline of the poetry of the Troubadours when the kingdom of Aragon was united to Castile, the Catalanian tongue, so long the medium of this charming verse and so well adapted to it, went down before the ruder and more virile language of the Castilians. These, with their bold, romantic character and strong spirit of national pride, soon banished the intruding tongue from literature, from law, and from the usages of polite society. Finally by the sixteenth century the Castilian language had become, in the strictest sense, the reigning language of the whole Spanish monarchy. So much for the origin and formation of the Spanish language—a tongue which by reason of its great dignity and stateliness was pronounced by Charles V. to be that in which alone man should address his Creator.

Of the forces in early Spanish literature which led up to the glory of the sixteenth century a word may be said. From its first known beginnings with the "Poem of the Cid," an epic of the twelfth century, and a religious play, "The Mystery of the Magian Kings," the nation became especially rich in ballads, these forming the oldest as well as the largest collection of popular poetry, so called, that is to be found in the history of any European peoples. Akin to these were the picturesque chronicles of Alonzo the Learned, in the thirteenth century, the logical predecessors of the romances of chivalry, of which the first, the "Amadis de Gaula," became the book of the age, and led to innumerable imitations, their influence extending over two centuries, until in "Don Quixote" Cervantes sounded their death knell.

Throughout the extensive body of historical ballads there prevails a uniformly high tone of sentiment such as might have been expected to distinguish the popular poetry of a free nation, haughty in its

traditions as well as its mode of life and engaged in continual warfare. Quick flashes of humor also marked the earlier writings, and though they were more spontaneous than purely literary, they brought out salient features of life and character. Every phase of national literature from the twelfth to the nineteenth century is distinguished by this humor. One phase was the "Novela Picaresca," or stories of adventures among rogues, a school which proved its popularity by many imitators and extended its influence to many lands and literatures. One of the most famous imitations is found in "Gil Blas," and in English literature its influence may be noted in Fielding, Smollett and other writers, while there are those who claim that it may likewise be responsible to some extent for the immortal Falstaff. The great body of early literature was marked by a high romantic spirit, a wealth of imagery, a charm of grace and diction, which, combined with originality and dignity, was destined to flower forth under favorable conditions into the remarkable growth of the sixteenth century, the golden age of Spanish literature. The first of the picaresque or rogues' march tales, "Lazarillo de Tormes," was written in 1523 and was commonly attributed to Diego de Mendoza, one of Spain's finest soldiers, statesmen and historians, a man of most remarkable literary ability. All of Spain turned about to laugh at this and its successors, forgetting for awhile the more enduring claims of higher class literature, only one of which at that period, "The Wars of Granada," was able in any degree to catch the public fancy. This charming work, interwoven with a tissue of lovely ballads, is said to be the forerunner of Scott's historical romances.

Just prior to the opening of the sixteenth century the advent of the printing press in Spain brought a new stirring of foreign influence. Translation became the order of the day and was greatly favored in high places. The women, too, became infected with the fever of foreign culture, and in addition to the large numbers pursuing higher studies, women were even found lecturing in the great universities. The influence of French literature began now to make itself strongly felt, and remained always powerful and enduring. Versions of the Latin classics were in all hands and there was unexampled activity in the study and mastery of Greek. It is worthy of mention that the first Greek version of the New Testament came from Alcalá de Henares in 1514. Neither was Italian neglected, and the cult of Dante, Petrarch and Boccaccio became widespread. The closer intercourse between the countries took Spanish scholars to Italy, whence, enamored of the Italian tongue and letters, they took home with them special characteristics of style and taste to impart to their own literature. The man who

was chiefly responsible for the influence of Italian style on Spanish literature of this era was the poet Boscan, closely followed by his young friend, Garcilaso de la Vega, a soldier as well as a poet, who died heroically in battle at the age of thirty-three.

Though Spanish literature was enriched during the first half of the sixteenth century by numerous lyrical and pastoral compositions, yet epic poetry made but little advancement. The rapid success of the imitators of the Italian and classic style did not, however, deprive the old romance poetry of its rank, either in literature or the public estimation, for it was during this period that most of the old romances were brought together in collections, receiving the form which they have retained down to the present day, though it is estimated that about half the romances contained in the "Romanceros Generales" had no existence prior to this period. The first printed ballads were found in the "Cancioneros Generales," compiled by Fernando del Castillo and printed at Valencia in 1511. Among all the literary figures of this time that of Cervantes, the author of "Don Quixote," stands out with peculiar vividness. Born in the university town of Alcalá de Henares in October, 1547, he was seventeen years old when Shakespeare was born, and they both died on the same day, April 23, 1616. It was given to Miguel de Cervantes Saavedra to live in the most stirring and brilliant period of Spanish history, and he himself lived a life of stir and romance. By turns a member of a Cardinal's household in Rome, a soldier, a captive in piratical Algiers, dramatist, literary light, he proved himself always a man of great resource, of high courage and unfailing cheer. He took with him through life an injury to one of his hands, suffered at the battle of Lepanto. His writing, too, was taken up partly in the spirit of adventure, for, like all thoughtful people of his day, he had noted the hold which the impossible chivalric romances had on the minds of the people and recognizing their unwholesome influence on perfervid imaginations, he set out, with all the good humor in the world, to write a book which might serve as a corrective. He did more; he wrote in "Don Quixote" a classic and entrenched himself in the literatures of all times. The book's immediate success brought him what he needed far more than the acclamations of posterity—a little ease in the end of his days and a fame that could not help but be gratifying after his long and strenuous career. But though Cervantes enjoyed his fame, he never could be brought to regard the book itself seriously, believing himself capable of much more ambitious work. In reality it was as a dramatist that he desired to shine, but none of his plays ever attained to the popularity of those of his great contemporary, Lope de Vega. But the creations of the Spanish Shakespeare, as

de Vega has been called, are now forgotten, while Don Quixote and Sancho Panza still march merrily down the ages.

Naturally among a Christian and Catholic people the influence of religion must have been such as to quicken the forces of spirituality in literature and to give to it a character destined to leave its impress on the literatures of all succeeding times. In an age when nearly every educated person aspired to the honors of the pen, and a potential poet lurked under every cassock, it is not surprising to find a host of priestly and religious writers and a veritable army of mystics, over three thousand in number, setting the seal of their high, austere spirituality on the literary output of a day peculiarly rich in devotional energy. The names which first suggest themselves in this connection are of course St. Teresa and St. John of the Cross, but among the spiritual writers of this period other names are equally well known. There was John of Avila, belonging to the first half of the sixteenth century, whose "Spiritual Treatise" is of such wide and wonderful application that it is still a model for members of religious communities; Ponce de Leon, who lived toward the middle of the century and was the most eminent poet of the Salamanca school. We find him at the head of the lyric no less than the mystic poets, and his translations of the Psalms of David served as models for all succeeding versions of Greek and Latin poetry in the Spanish language; and Luis de Granada, who lived through this whole brilliant period, earning from some of his admirers the title of "the divine," by reason of his perfect mastery of elegant prose. His "Guide for Sinners" was translated into all languages.

In dramatic literature the Spaniards struck out for themselves a new course, vying in taste and genius with the Greeks and Romans. It was in the reign of Charles V. that the drama began to take form in Spain, in that fluctuant period when the conflict wages between the old and the new poetic styles, known as the Seville and Salamanca schools. On a neutral platform the young Thespian came forward and found at once a grateful and appreciative audience. At the beginning of the century the sacred and profane pastoral dialogue of Juan del Enzina were as yet the only dramatic compositions in the Spanish language, and with the exception of mystery and morality plays, given mostly before religious communities, the Spanish people as a whole knew nothing at all of dramatic entertainment. To them therefore, in all its freshness and charm, came the new drama, first popularized by Lope de Rueda, a Sevillian, who as well as a playwright of note also became an actor-manager. Two other Spanish dramatists deserve mention here, not only for their own success, but because the rich-

ness of their work formed a mine from which writers of other lands and later years drew copiously — Guillen de Castro, whose "Cid" was imitated by Corneille, and Gabriel Tellez, otherwise known as Tirso de Molina, one of whose plays formed the groundwork for productions of Beaumarchais, Mozart, Rossini and Byron. Spanish drama reached its highest point in the works of Lope de Vega and came to a splendid close with the brilliant Calderon.

The second half of the sixteenth century is celebrated as the period when prose writings renewed the ascendancy which they had lost in the torrent of chivalric romances which inundated Spain and threatened the extinction of all genuine poetry and eloquent prose. Alive to the unhappy trend of the day, every serious poet and every prose writer of cultivation and talent labored earnestly to oppose this contagion, until finally it was forced to disappear, an interesting but evanescent phase of a notable period. There now sprang up a strong growth of didactic prose, which owed its first sowing to Fernan Perez de Oliva, whose "Dialogue on the Dignity of Man" was the first specimen in Spanish literature of clear and connected discussion, maintained in dignified and elegant language. Historical prose was brilliantly represented by Diego de Mendoza, mentioned previously, a man of wide versatility who touched literature at many points. About this time a new influence in historical works began to show itself. Writings were accruing on the New World across the sea, its discovery, its wonders, its vividly romantic adventures and the curious life of its peoples; and the effect of this was to supply a new style of historical composition, and to give the final impulse to the passing of the old national chroniclers. The last of these was Supelveda, the official historian of Charles V., and with him died a picturesque phase of Spanish literature. In the list of Spanish historians of this period we are more or less intrigued to find two familiars of our schooldays, Hernando Cortes and Las Cases, then deemed mythical personages of a remote, harassing and mysterious age.

With the growth of historical composition, epic poetry, which had been rather slow in growth, became somewhat of a passion, and the epic was essayed by numberless ambitious poets, without, however, producing anything of superior value. Lyric and bucolic poetry and elegant satire were likewise cultivated by various pupils of the classical school, which still maintained its ground in Spain, though declining in Italy. The disciples of this classical school, together with those writers who since the time of Boscan and Garcilaso de la Vega, had formed their style on that of the ancients, have been called the Spanish *Cinquecentisti*, in a favorable sense

of the term, though it is true some of them wrote in the seventeenth century. The sixteenth, however, can lay claim to the most distinguished, and the rest, whose number is incalculable, possessed at least the merit of high literary ideals; that is, the wish to express sensible ideas in correct language. This is more than can be said of Gongora, who aspired to be the founder of a new fashion in literature and to create a new epoch in Spanish poetry by means of superexquisite cultivation and exotic refinement. With him instead began the first real decline in Spanish letters. Conceits, affectations, inflations of style took the place of the former simplicity and directness of thought and method, with a conspicuous absence of the spirit of genuine eloquence. Calderon was the last of the great writers who helped to embellish Spanish style, and whose works made the glory of that memorable epoch. Antonio de Solis, ten years the junior of Calderon, deserves mention also as an eminent author who was not without name as a statesman. His "History of the Conquest of Mexico" is a model of elegant simplicity.

It is a curious commentary that, despite the fruitfulness of letters at this period, no school of criticism was developed, and little of any value in this line has come down to us. No literature is greater than the nation which produces it, and in the literature of this period the greatness of the Spanish nation is most faithfully expressed. The genius of its people is shown in the remarkable degree of cultivation which letters attained and in the chaste beauty of its classic prose, which was earlier cultivated in Spain, than in any other country of Europe. In numbers of works, distinguished for elegance of style and intellectual energy of composition, the Spaniards far exceeded the Italians of the same period. Spanish poetry, too, was more distinctly national than any other branch of modern poetry in Europe; and of all the poets of modern times the Spanish reign supreme in the realm of mystic verse, of which they were the inventors and in which they attained an excellence never since reached, much less surpassed. The writers of this glorious period of Spanish history have left a body of literature, rich and lovely, dignified and beautiful, and markedly characteristic of a people whose tenacity to their own ideals made their literature what it was, expressive alone of Spain and the Spanish people.

HELEN MORIARTY.

Columbus, Ohio.

MARSHAL FOCH.

THE eyes of the world have been fixed upon the striking personality of the man who won the biggest war in history. Everyone has been anxious to know all that was to be known of the man and his methods. Captain A. Hilliard Atteridge¹ has gratified that desire in a valuable volume which will be read with keenest interest wherever the English language is understood. It was fitting that a well-known Catholic journalist and litterateur should pay this tribute to the foremost Catholic layman of the epoch. Mr. Atteridge is, besides, otherwise well fitted to deal with the subject. He is a military man himself, having smelt powder and seen fighting during Kitchener's campaign in the Soudan, which he described as war correspondent for the London *Daily Chronicle*, and has since been on active service on the Flanders front, where he acquired practical experience of the science of warfare.

It was in the Midi in the sunny south, in the land of the *trouvères* and *troubadours*, in that section of France which was once an independent petty kingdom intersected by the Pyrenees, that Ferdinand Foch, as well as that other distinguished soldier and devout Catholic, De Castelnau, first saw the light. He comes of a good old Gascon stock. In 1780 his grandfather, a prosperous wool merchant, invested some of his money in land and built himself a house in the village of Valentine, near the town of St. Gaudens, on the upper Garonne close to the Pyrenees. He lived under the First Empire, when France was filled with that passion for military glory which the great Napoleon personified, and lived to witness its decline and fall. He gave his son, born when that Empire was at its zenith, the name of Napoleon. This son married Sophie Dupré, the daughter of Colonel Dupré, who, after the final defeat of Napoleon, retired from the army and settled at St. Gaudens. Ferdinand Foch was the third offspring of that marriage and was born on October 2, 1851, just two months before the famous *coup d'état* which preceded the foundation of the Second Empire. His father was then stationed at Tarbes, in the Hautes Pyrenees, as secretary to the prefecture of the Department. Owing to his official duties, subsequently involving frequent changes of residence, young Ferdinand's education was often interrupted. He passed through several schools in the course of a few years. His father disliking the idea of sending his boys—there were three brothers, the youngest of whom, Germain

¹ "Marshal Ferdinand Foch: His Life and His Theory of Modern War." By A. Hilliard Atteridge, with a preface by Colonel John Bachan; London, Skelington and Son.

Foch, became a Jesuit, entering the novitiate in 1872—their education was first carried on in the home or the local day school. His first college was the old College of Tarbes, where Ferdinand spent two years, passing the vacation in the country house at Valentine, from whence a favorite outing was to the shrine of Our Lady on the summit of the Bout de Puy, overlooking the upper valley of Garonne. Though he won no prizes at his first school, he obtained at Tarbes the *accessit* or “honorable mention” for religious knowledge, Latin, history and geography, evincing a marked capacity for mathematics and a taste for solid reading. At twelve years of age he had read all Thiers’ voluminous “History of the Consulate and the Empire,” a feat which many men, not to say boys, would be slow to undertake, and which revealed a precociously studious disposition.

“Probably,” comments Captain Atteridge, “it helped to decide his future career. We may guess that he passed lightly over the political chapters, but reveled in the battle stories from the cannonade by the mill of Valmy to the last charge of the Old Guard at Waterloo. If he dreamed of future battles in which he would some day play a part, his wildest imagination could not suggest that he was himself to command greater armies than had ever followed the eagles of the hero.” In 1867, when his father was appointed receiver of the revenue at St. Etienne, near Lyons, he became a pupil at the Jesuit College de Saint Michel, where he qualified for the *baccalauréat*, which marks the completion of a young Frenchman’s general education. Having decided to adopt the military profession as a career, he was sent to a special class at the Jesuit College of St. Clement, in Metz, to prepare for the entrance examination at the Ecole Polytechnique in Paris. Becoming a resident pupil in 1870, he found himself for the first time living away from home. His professors were Père Saussier, who had been a French naval officer, and Père Lacouture, a distinguished mathematician. The prize for good conduct was voted to him by his fellow-students, which shows how much his character on the moral side was already formed. It was an eventful year. While he was spending the summer vacation at St. Etienne, France declared war upon Prussia, on July 19, over the Hohenzollern candidature, thus falling into the trap skilfully set for it by Bismarck and Prim. Metz speedily becoming a storm centre, the class were unable to reassemble at St. Clement’s, the college being transformed into a military hospital. When the defeat at Sedan sealed the fate of Napoleon III and the Second Empire, and there was a call for new levies, Foch enlisted in the Fourth Regiment of Infantry and looked forward to seeing active service, but was disappointed, for

in January, 1871, came the armistice and peace negotiations and his battalion was disbanded. All the military experience he had so far gained was four months' barrack training.

After another brief sojourn at home, when the college at Metz, then a German fortress, was reopened he returned to pursue his studies amid changed surroundings. The German flag had replaced the French tricolor, a German general had his headquarters at the prefecture, and part of the college had been requisitioned as a temporary barrack. Having successfully matriculated at Nancy, where the Germans were as much in evidence as at Metz, and from whence he was destined in after years, as a general in command, to march to his first battle, he joined the Polytechnique at Paris on November 1, 1871, long known and painfully remembered in France as *l'année terrible*, the year of the Commune and the massacre of the hostages. The school, held by the Federalists, had been stormed on May 24 by a battalion of chasseurs. After its capture drumhead courts-martial had been held in one of the classrooms and the condemned communists had been shot in the playground, the dead bodies being afterwards collected in the large billiard room.

Among Foch's fellow-students at the Polytechnique were, by a striking coincidence, Joffre, the future chief of the French staff and commander of the armies of France in the first stage of the late war, and Ruffey, who was to be a member of the Conseil Supérieur de Guerre in 1914 and commander of the Third Army in the earlier operations. In February, 1873, Foch and Joffre got their commissions, the former in the artillery, the latter in the engineers. After two years in the garrison at Tarbes he was admitted to the cavalry school at Saumur, where he was made a captain, and on his rejoining the artillery was given command of a field battery in the tenth regiment of that arm stationed at Rennes, in Brittany. It was while on garrison duty there he met the lady who became Madame Foch—Mlle. Julie Bienvenue, of St. Brieuc. After his marriage he bought the estate and the old manor-house of Trefeunteuniou, near Morlaix, in Finisterre, the far west of Brittany, between the Montagne d'Arrée and the Atlantic. Brittany, famed for its staunch Catholicity, to patriotism and its fondness for the old Celtic tongue, still familiar on the lips of peasantry and fisherfolk, appealed to one who has always and under all circumstances been a fervent Catholic. He is proud of Brittany, which he has made his home, and of the brave Bretons, "my Bretons," as he calls the soldiers who flocked to the flag from that part of the country. It was at Rennes he began the studies which procured him in 1885 admission to the Ecole de Guerre, or French Staff College, where years after as professor he displayed his mastery of the science of war and of which he

was later made Director. It was sheer ability that advanced him. Promotion was made difficult for a professing and practical Catholic. Gambetta's cry, "Le clericalisme; voilà l'ennemi!" had been caught up and repeated, parrot-like, by the unthinking multitude and used as a party watchword to detach the people from the influence of the priests. Anti-clericalism was rampant. "An officer," writes Mr. Atteridge, "was likely to find his professional merit and zeal disregarded if he openly professed and practiced the religion that was associated with so much of the historic glories of France. The faith of St. Louis and Duguesclin, of Jeanne d'Arc and Bayard, of Champlain and Montcalm was a barrier to a good soldier's success in his career. There came a time when the Ministry of War at Paris had its secret *dossiers*, noting as a black mark against an officer's name that he went to Mass on Sundays. No doubt the names of men like De Castelnau and Foch were to be found in this list, which happily for the future of the French army was before long denounced in the French Parliament and consigned to the waste-paper basket." Foch had overcome this secret conspiracy singlehanded, for he had no influential friends in high places and had always held studiously aloof from politics. "The son of pious Catholic parents, a student in the Jesuit colleges, Ferdinand Foch," says Captain Atteridge, "has been all through his life an earnestly religious man, practicing and professing his religion without either ostentation or concealment, and paying no attention to what those who were hostile to it might think or say of him. He made it the guide of his life, the inspiration of his high ideals of duty and self-sacrifice."

It was in teaching military history and strategy in the *Ecole de Guerre*, where he had nearly five hundred pupils, many of whom served as generals in the late war, that he established his reputation. His lectures have been published in two volumes,² which Colonel John Buchan praises as "the most important military works since Clausewitz" and which military critics in all countries at once recognized as the works of a master hand. His theory and practice of warfare have been grounded on a deep study of the great Napoleon's tactics. Lieutenant-colonel in 1900 and colonel in 1903, after filling several staff appointments, it was not until June 20, 1907, when he was nearly fifty-six, that he was made brigadier general. It was on the retirement of General Bonnal that, to his surprise, he was made director of the *Ecole de Guerre*. His name was not among the candidates, and Clemenceau, then a noted anti-

² "Des principes de la Guerre, Conférences faites à l'Ecole Supérieure de Guerre." Paris, 1903, 1905, 1911, 1917. "De la Conduite de la Guerre, La Manœuvre pour la Bataille." Paris, 1904, 1906, 1915.

clerical, was Prime Minister; it is to be hoped the latter's views have since been more than modified, seeing that the clericals as chaplains or combatants in the fighting ranks have been among the bravest of the brave. "One day," relates Mr. Atteridge, "he was surprised by receiving an invitation to lunch with the Premier. When he arrived at the house he found that he was the only guest. During the *déjeuner* there was a general conversation on various subjects, but not a word was said of the vacancy at the *Ecole de Guerre*. It was only when the coffee and cigars stage had been reached that Clemenceau said, without a word of introduction, 'I have some news for you, general. You are appointed director of the *Ecole de Guerre*.' 'But I am not a candidate,' said Foch, who was completely surprised by the announcement. 'Possibly,' replied Clemenceau, 'but you are appointed all the same, and I am sure you will do good work there.' The general thanked him, but suggested a difficulty. 'Probably you are not aware,' he said, 'that one of my brothers is a Jesuit.' Clemenceau laughed. 'I know all about it, and I don't care a rap. Mon Général, or, rather, Monsieur le Directeur, you are appointed, and all the Jesuits cannot alter it. You will make good officers for us, and that is the only thing that matters.'"

The four years, from 1907 to 1911, Foch directed the *Ecole de Guerre*, during which hundreds of officers who were to hold high command in the coming war were formed by him. The results amply justified the wisdom of the Premier's choice. He knew, and made no secret of his knowledge, that military training in France was very defective, not only before the war of 1870, but long after it. He held that military history must be the basis of all study of war, a conclusion drawn from the fact that in 1870 the French army was at a disadvantage when confronted with adversaries trained by the teaching of history and the study of concrete cases by Scharnhorst, Willisen and Clausewitz. Napoleon's campaigns, upon which he grounded his strategy, marked the beginning of modern warfare. The wars of the eighteenth century had been carried on by comparatively small armies of professional soldiers; the nineteenth century saw the development of wars by "nations in arms," and the evolution began with the conscript levies of the Revolution. The time was very near at hand when his theories were to be tested by being put in practice. When the Agadir crisis in Morocco threatened war with Germany—a war averted by the personal intervention of the ex-Kaiser—England and France drew closer together. British officers were present at the great manœuvres of the French army and in the autumn of 1912 a *mission militaire*, a group of French officers, was sent to watch the British army manœuvres in East Anglia, General Foch being appointed chief. On the 17th of

the following December he was promoted to the command of the Eighth Army Corps at Bourges, and in August, 1913, to that of the Twentieth Army Corps, then the crack corps of the French army, with headquarters at Nancy, an important strategical position which would form the "covering force" under the protection of which the whole French army would be mobilized in the event of war.

The Agadir crisis was passed, and for the moment no war cloud darkened the political horizon. But it was only the lull before the storm, "the torrent's smoothness ere it dash below." No one thought so then. On July 18 Foch left Nancy on a fortnight's leave, and was spending it at his home in Brittany when, like a bolt from the blue, came the news of the declaration of Russia to stand by her "little Slav brother Serbia," menaced by Austria after the assassination of the Archduke Francis Ferdinand. Foch hurried back to Nancy. On July 28 the Dual Monarchy declared war upon Serbia; on the afternoon of the same day Russia mobilized; on August 1 Germany, Austria's ally, and Russia were at war, and then the order for the mobilization of the French army was issued. The die was cast and each country was to stand the hazard.

Mr. Atteridge describes in detail all the military operations in which Foch was engaged. "Comparatively few people in England or in the United States," he observed, "have ever heard of the first great battle of the war—the fighting on a front of some forty miles, which is known in France at the battle of Morhange, in Germany as the battle of Metz—or of the battle which followed on the French fortress line, an engagement of several days' duration, known in France as the battle of Trouée de Charmes." The former resulted in a defeat, but it was the first battle of General Foch's career, his splendid Twentieth Corps forming the best fighting unit in De Castelnau's army. It was then that he lost two of his best young officers, Guy de Cassagnac and Lieutenant Xavier de Castelnau. An incident which shows the stuff of which French soldiers are made is here narrated. When De Castelnau was told of his son's death, while he was arranging for the general retreat, he paused in silence for a moment with bowed head and then said: "Gentlemen, we must get on with our work."³ Foch was to have the same sad experience. It was while preparing for the battle of Trouée de Charmes, a victory for the French, he heard that his son, Lieutenant Germain Foch, and his son-in-law, Captain Bécourt, had been killed in action in the battle of the Ardennes.

The decisive part he took in winning the battle of Trouée de

³ General de Curieres de Castelnau, born on Christmas Eve, 1851, is, like Foch, a native of Gascony. He served in the Army of the Loire during the war of 1870, and attained the rank of captain at the age of nineteen.

Charmes, the first great victory for France, caused him to be promoted from being a corps commander to be commander of the Ninth Army. Had it been lost it would have forced the Allies back on the Seine line and the whole aspect of the campaign would have been altered for the worse. In the five days' battle of the Marne, which began on September 6, the Ninth Army was placed in the centre of a long line on a front of over a hundred and twenty miles between Paris and Verdun. Foch, who in his lectures at the Ecole de Guerre laid stress on the commander's will to conquer, on the attack and giving the decisive direction to the blow at the right moment, found himself in a position to give an object lesson in tactics which would never be forgotten. His object was to find out the fissure, the weak point in the enemy's line. He found it and penetrated it. The blow was aimed at Van Hausen's flank; the Ninth Army was saved; he broke the centre of the German battle line, and proved the value of a theory of warfare he had elaborated fourteen years before he made himself famous by its execution. The battle of the Marne was won. The tide of invasion had been turned back, and the long war of entrenched positions was about to begin. The French Government signalized his services by bestowing upon him the Grand Cross of the Legion of Honor in recognition of his leadership in this important battle. Given command of the northern group of armies, the next service he rendered was the invaluable support he gave to the hard-pressed British line at the first battle of Ypres, known in France as the battle of the Yser. At this time he transferred his headquarters from Doullens to Cassel, living in the house of a local notary. "No soldier in high command," says Captain Atteridge, "ever lived with less of ceremony surrounding his headquarters. The motor car was used only for rapid rushes to the front. He walked about the little town of Cassel unattended even by an orderly. The war correspondent of a London paper one day gave a characteristic glimpse of the general's ways. He had followed him on the chance of having a few words with him at headquarters. Foch turned aside to enter a church. The journalist went in and saw the general kneeling on the pavement with clasped hands and downcast head." This glimpse into the inner life of the valiant Christian soldier reveals the greatest greatness of the man, his sincere, solid piety. The Jesuit pupil had not forgotten the teachers and teachings of his youth; he had learned Loyola to some purpose; he remembered the golden maxim of the soldier-saint: "Pray, believing that everything depends upon God; act as if everything depended upon yourself."

That the Allies had extricated themselves from a perilous position was mainly due to Foch. The public was kept in the dark; only

those at the front knew it. "The French official communiques," records one of the historians of the war, "gave the barest information, and the Paris papers could not supplement it. The English press continued to publish reassuring articles and victorious headlines; indeed, we were officially told that our front had everywhere advanced on a day when it had everywhere fallen back."⁴ One of the results of this official reticence, Mr. Atteridge points out, was that the immense service Foch had rendered to the Allied cause was almost unknown, and was not properly appreciated. In the spring of 1916 he had a narrow escape from death or permanent disablement during another drive after attending a conference at the headquarters of the central armies. Suddenly a woman with a child in her arms, not noticing the near approach of the car, stepped out to cross the road in front of it. The chauffeur, to avoid running over her, put on the brakes sharply and pushed around the steering-wheel. The car skidded and crashed into one of the roadside trees. Foch was hurt about the head, happily not very seriously, but seriously enough to have to be taken to the hospital at Meaux, where he was under medical treatment for some days. "It is a tribute to the position he held in the eyes of the army and the French people," comments Mr. Atteridge, "that it was considered advisable to suppress all news of the accident. The danger of such a chief being lost to the French armies would have caused widespread depression and anxiety if it had been known." He made a rapid recovery, however, and was able to coöperate with Sir Douglas Haig in the battle of the Somme, which began on July 1, 1916, and lasted until the opening of 1917, when the German retreat to the Hindenburg line gave the Allies the first great gain of ground they had secured since the tide of invasion turned at the great battle of the Marne. Towards the close of the summer he had to temporarily resign his command through illness, but a short rest restored his health. His sixty-fifth birthday anniversary was approaching, when, under the French army regulations, he would be entitled to retire from active service; but on September 30, 1916, the "Official Gazette" announced that on account of his eminent services he was exempted from the regulation and that his name was to remain "without limit of age" on the list of the first section of the General Staff, the list from which men are selected for high command. This foreshadowed his latest appointment, on May 15, as chief of the General Staff, followed by his inclusion as representative of France in the new Supreme War Council, formed to secure unity of action by the Allies. It was worthy of note here that another of these representatives of the

* "History of the War." By Colonel John Bushan. Vol. V., p. 10.

great powers was an earnest Catholic, General Cadorna, the Italian general. General Foch's appointment preluded his ultimate nomination as commander-in-chief, although there was some jealous opposition in England to a foreigner being made generalissimo.

"It may be safely said," observes Mr. Atteridge, "that while the course of events suggested it, it was the personal character of General Foch and the solid confidence he inspired in all the armies that made the change possible. It is said that during the very critical situation produced by the German offensive of 1918 the proposal to place the Allied operations under the resourceful control of Foch came from Clemenceau, who had long learned to appreciate his masterful grasp of the science of warfare. On March 30, when the announcement of his appointment was made, General Pershing offered him the services of the American officers and men, saying: "I have come to tell you that the American people would consider it a great honor to have our troops engaged in the present battle. I ask for this in its name and in my own. Just now the only question is fighting. Our infantry, artillery, fighting men—all that we have is at your disposal. More are coming, and as many as may be required. I have come expressly to tell you that the American people will be proud to have their troops engaged in the greatest and finest battle in history." The magnanimous offer was of course accepted.

Henceforward Foch became the organizer and achiever of victory—a victory which ensures him a permanent place in military annals. The English Premier, addressing the House of Commons on April 9, said: "It is not merely that he is one of the most brilliant soldiers in Europe. He is a man who, when we were attacked and were in a similar plight at the first battle of Ypres, moved the French army there by every conceivable expedient—omnibuses, cabs, lorries, everything he could lay his hands upon—he crowded French divisions through, and undoubtedly helped to win that great battle. There is no doubt about the loyalty and comradeship of General Foch." Lord Curzon, speaking in the House of Lords, said: "Strategical control ought to be invested in single hands, or should I say in a single brain. We have suffered grievously from the want of this in the past. In these circumstances, if by common consent a single direction was required, it could only be by a Frenchman; and if a Frenchman—by General Foch." British generals in the field welcomed his appointment, and Lord French, not long after, spoke of him as the greatest leader the war had produced, an opinion universally held. Colonel Buchan, in a preface to Mr. Atteridge's book, says: "The war has ended with Ferdinand Foch beyond doubt its greatest military figure."

It was a gigantic task that was entrusted to him. The enemy was attacking in overwhelming force. It was the time when Haig frankly avowed: "We are fighting with our backs to the wall." Germany was bringing all its forces to bear against the Flanders and French fronts in a great offensive to gain a victory that would enable it to dictate peace. The French and British armies were to be separated by the push towards Amiens, and the British line itself broken by the drive towards the Channel ports. If these operations succeeded, the British army would be partly forced back across the lower Seine, partly pushed back with the Belgians to the sea and obliged to seek safety in a difficult reëmbarkation, after which the Channel coast as far as Calais would be added to the coast fortress of the Ostend-Zeebrugge seafront, Paris would be attacked and taken and the French and British armies beaten in detail. The Allies under Foch's masterful leadership foiled this daring scheme and saved France and England. The counter stroke of July 18, when twenty villages were cleaned of the enemy and 16,000 prisoners captured, proved to be the turning point of the war. The Germans had used up their reserves and were forced to act on the defensive, while American reinforcements were pouring across the Atlantic. At the opening of August the German retreat began, and on the 7th the "Journal Officiel" published the President's decree raising Foch to the rank of Marshal. "At the hour when the enemy by a formidable offensive on a front of one hundred kilometres counted upon snatching a decision and imposing a German peace, which would mean the enslavement of the world, General Foch and his admirable troops," declared M. Poincaré, "vanquished him. Paris liberated, Soissons and Chateau Thierry reconquered, over two hundred villages delivered, 35,000 prisoners and 700 guns captured, the hopes loudly proclaimed by the enemy crumbled into dust, the glorious Allied armies pushed forward in one victorious bound from the borders of the Marne to the banks of the Aisne—such are the results of a manœuvre as admirably conceived by the commander-in-chief as it was superbly executed by incomparable commanders. The confidence reposed by the Republic and all its Allies in the victor of the Marshes of St. Gond, in the illustrious leader of the Yser and the Somme, has been fully justified. The dignity of Marshal conferred upon General Foch will not be merely a recompense for fresh services, it will consecrate still better in the future the authority of the great soldier who is called to lead the armies of the Entente to final victory."

After the staggering blow which the enemy received they were soon after in full retreat towards the Rhine; Germany sued for

peace on the basis of President Wilson's fourteen points; and during the early hours of Monday morning, November 11, 1918, the armistice was signed and a war which lasted more than fifty-one months, or 1,561 days, was ended by the capitulation of the Central Powers. On November 30 Kaiser Wilhelm II., King of Prussia and the titular ruler of Bismarck's short-lived German Empire, abdicated, and on January 18, 1919, the Peace Conference, charged with remaking the map of Europe, was opened in the Salle de l'Horloge of the French Foreign Office on the Quai d'Orsay, Paris. It marked the final victory of the Entente—a brilliant, but, in some respects, a barren victory. It brought England, France and Italy almost to the verge of national bankruptcy, with small prospect of being able to wring from Germany the enormous indemnity demanded. We were told it was a war to end war, but has it, or is it likely to? With divided counsels inside and outside the portals of the Conference; with disputes about the delimitation of the frontiers of new states and accessions of territories by others; with the red terror of Socialism gone mad under the guise of Bolshevism, the European outlook is gloomy and menacing. The spirit of peace does not brood over the Continent, but rather stormy petrels. Events do not portend either a long period of peace, for which long-suffering nations have been sighing, or the realization of the alluring day-dream of a League of Nations. All this does not detract from the merits of the great soldier who has liberated his country and secured for Western Europe a victory dearly, many think far too dearly, purchased. With exhausted exchequers and national debts mounting into fabulous figures, it has left the victors in a condition such as Lord Lansdowne, who now has the sad satisfaction of having his unheeded warning fully justified, predicted.

One result of the war ought to be the effacement of that mental aberration which too long warped the judgments of the men in power who have shaped the home policy of the French Republic. National gratitude to the organizer of victory ought alone put an end forever to anti-clericalism. It should never be forgotten that it is to its great Catholic citizen the Republic owes its salvation from the gravest peril that ever faced it. Religion, adherence to the ancient creed of Catholic France, was to him something besides personal conviction. "It has been," writes Captain Atteridge in the closing chapter of his thought-compelling work, "a real force in the shaping of his great career. The faith which was that of united Christendom for more than a thousand years before the Revolution of the sixteenth century, and which in our own day has more adherents than any other form of Christian belief, is assured by, even if no higher claim is made for it, one that gives to men a clean chart

by which to set their course in the voyage of life. It gives to those who accept its guidance a clearly-defined rule of conduct and plain answers to the problems of time and eternity. Our soldiers in France and Flanders have learned something of its practical bearing upon the lives of men. For not a few of them the crucifixes standing untouched in ruined villages or by the roadside amid shell-torn trees have come to be strangely impressive symbols of the faith that stands unbroken amid the storms of life. They have seen, too, peasants and townsfolk in the churches not only for once-a-week service, but at all hours of the day, and soldiers gathered round the improvised altars on the fighting fronts and even in the trenches themselves. In the campaign of Lorraine and in the days of the Marne, when Foch was not at a headquarters behind the war front, but among the soldiers in the actual battle-front, he was more than once seen kneeling among his officers and men at those Masses celebrated under the open sky. At Doullens, Cassel, and Prevent, day after day he found time for the morning Mass, and in some leisure moments of the day he went again to pray before the altar. On the morning of the most critical day in the fight by the Marshes of St. Gond he appealed to the chaplains for their prayers. On the eve of his last great effort he asked for the prayers of the children of France. The editor of a Catholic newspaper, the "London Universe," passed on his appeal to the Catholic children of England, and was able to write to Marshal Foch that thousands of them were offering their Communion for him. Amid the pressure of his work the Marshal wrote a letter of thanks for what he described as 'this great act of Faith.' On the authority of one who was with him at his headquarters we know that on the evening of July 17, when he had issued his final orders for the great efforts of next day, he laid all work aside to find time for prayer. He had told his staff that he wished, if possible, to be left undisturbed for an hour or so. They naturally thought that he felt he needed a brief rest. But how he was spending the hour was revealed by a mere chance. A telegram arrived that required his immediate attention. He was sought for and found alone in a little chapel kneeling in prayer before the Blessed Sacrament." He was seeking light and guidance where he was sure to find it, where many of the knights of old in the ages of faith kept their vigil of arms and prepared themselves to do battle for the right, fortified by prayer.

R. F. O'CONNOR.

Dublin, Ireland.

PLANTS: THEIR ROOTS AND NAMES

DID you ever wonder how some familiar plants get their names —why daisy is so called and what anemone means and who first christened the pansy? Ae desire to learn something about the appellations of plants leads one into unexpected fields of history, folklore, biography, geography, language, while the suitability of certain names to certain plants makes one respect the peoples of bygone days who could see so much in the features and lives of their vegetable neighbors.

Plant names are often of great age, and in many cases it is not known how many thousands of years ago they were coined. Thus lotus takes us back to the legendary period of Greek history, long before real history began to be written; it was beyond doubt a common word in conversation long before there was an alphabet to embalm it. With slight changes, many familiar terms are known by all related nations in their varied speech, so that some household English word may be traced back through several languages to the deadeast of all tongues, the Sanskrit. Many peoples have made contributions to the botanical part of our dictionary, Greek, Latin and Anglo-Saxon predominating. Some of the words have come to us direct, but others are traced through a path so faint that only a keen eye for letter changes and an acute ear for tone shades could detect the descent. As one philologist says: "Birch takes us back to the primeval forests of India, for it seems to have its origin in the Sanskrit 'bhurja.'" In the Middle English period it was birche, or as the Scotch still have it birk; but it has allied forms in Anglo-Saxon, Icelandic, Swedish, Danish, German, Russian, Polish, and Servian, wherever the tree is known, which are but other spellings for the same Sanskrit "bhurja." Tamarisk, a tree with very dark bark, is from "tamas" (darkness), and traces of Sanskrit are found in fern, rice, ginger, deodar, while gorse, like "horror," is a descendant of the Sanskrit "hrsh," or "harsh," to bristle.

Phlox is a good Greek word, as will be seen at once by the initial "ph"; it is the name of some plant which must have been flame-colored, for it comes from the verb "to burn." The phlox of modern botany, however, is a native American plant, and the discoverer must have gone to his Greek dictionary and culled the word as especially applicable to the red blossoms of some of the species. Anemone and windflower are identical in meaning, windflower being a translation of the classic name the Greeks called the blossom, because, as Pliny tells us, "it opens at the wind's bidding." The

amaranth, species of which are known as pigweed, prince's-feather, and love-lies-bleeding, gets its name from that imaginary flower of the ancient poets supposed never to fade; the word is a combination of the prefix "a" not, and "mortal," and immortality is a characteristic of which the gardener would gladly rob the pestiferous pigweed, if possible. Whoever named the cranesbill "geranium" did not coin a new word, but only applied the Greek name of the bird to the long, slender beak of the seed-vessels, as the Anglo-Saxon did.

Some words lifted directly from the Greek into English are cyclamen, smilax, chrysanthemum or "gold-flower," polyanthus or "many-flowered," myosotis or "mouse-ear." Celery and parsley both come from the same Greek root, strange as it may seem at first glance; "petroselinum" is the term for parsley, or really "rock-celery," and the last part of the word (selinum) furnishes us, by way of the French, with a name for celery, while a contraction of the word into "persil" became in time "parsley." Cherry comes to us from the French "cerise," but they got it from the Greek "kerastus," or "horn," owing probably to the hardness of the wood. Flax, meandering through most of the principal languages, reaches at last the same Greek root as ply, to "bend" or "plait." Box is Anglo-Saxon for "buxus," the Latinized form of the Greek name of the tree: it is from the use of the wood for making cases that the word "box" came to mean any receptacle made of firm material topped with a lid. From the Greek root, which translates into rose, we get not only the name of our most popular flower, but also rhododendron, or "rose-tree," and rhodora. Hellebore is the plant the Greeks honored by bestowing upon it the name of their own country Helle; which was in turn named from the beautiful maiden who fell off the golden-fleeced ram at the Hellespont; perhaps there may be some legendary connection between the name of the plant and that tragic event.

Daffodil comes from asphodel, which it formerly was called. The initial "d" is not satisfactorily accounted for, unless it might have come through the German "der asphodill" and then "d'asphodill." The Greek word for apple translates letter for letter into "melon," from which we get "malus," the Latin for apple. Melon became applied to fruits of the vine through a compound word, "melon-apple," or "melopepo," a name they gave to an apple-shaped species of large melon, and hence it is that to us "melon" denotes gourd-like fruits rather than genuine apples. Here come in several interesting word formations. Camomile is "humble-melon," and translated literally means "earth-apple," or "earth-melon," being so called from the lowliness of the plant and its musk-melon-like odor. From "pepo," the real Greek word for melon, comes pumpkin, by way of

the French; the word originally meant "cooked by the sun," or ripe, mellow, because not eaten until ripe. Apricot, through the Arabic, is a Greek form of "cook," and means "precocious," or early ripe.

Latin, like Greek, is by no means a dead language, since it furnishes hundreds of pretty names for living plants. We are really speaking good Latin whenever we say *laburnum*, *arborvitæ*, *viburnum*, *auricula* (little ear), *gladiolus*, when accented on the second syllable, *cereus* (wax-candle, from the columnar shape of one species of the cactus); *arbutus*, which, if accented on the first syllable, has the same sound it had when first applied by some early Roman to the European straw-berry tree. *Senecio* is from "senex," "an old man," in allusion to the silky down of the seed which is supposed to suggest the silvery hairs of age. *Lupin* is from "lupus," or "wolf," and indicates the wolfish appetite of the plant for carboniferous soil. *Juniper* is a short form of "juniperus"; *gin* is a contraction of *Geneva*, a kind of liquor flavored with juniper-berries, or "genievre berres," as the French makes it: Tennyson doubtless had knowledge of this relation between gin and juniper when he wrote:

The gin within the juniper
Began to make him merry.—Amphion.

Many plant names lead back to the Latin through French, either modern or mediæval. Thus *jonquil* is a direct French descendant of "juncus," or rush, the one plant being named from the resemblance of its leaves to those of the other. *Millet* is the diminutive of "mille," a thousand, which almost seems the correct number of seeds to each head. *Pansy* is literally "for thoughts," as it is derived from "pensee," thought. *Dandelion* is "tooth of the lion"; there is a difference of opinion as to which part of the plant is supposed to represent the lion's tooth; some fancy the jagged leaves gave rise to the name, while others claim that it refers to the yellow flowers, which they liken to the golden teeth of the heraldic lion. In nearly every European and English-speaking country the plant bears a name of similar signification. *Plantain* is from "planta," the sole of the foot, perhaps named from its flat leaves, though it may be for the reason that the plant follows man's footsteps so closely; the Indians named it from the latter habit:

"Wheresoe'er they tread, beneath them
Springs a flower unknown among us,
Springs the White-man's-foot in blossom."—Hiawatha.

Other Latin words that have been changed into flower names are *clove* ("clavus," a nail, which the dried flower-bud is supposed to

resemble), cabbage ("caput," head), lettuce ("lactic," milk, from the white juice which flows from the plant when cut), radish ("radix," root), fennel ("fenum," hay) and hundreds of others.

A few of our plant names have retained their original Anglo-Saxon form, letter for letter, such as elm, corn, and bean. But most of the words from this source have changed at least slightly from the early form, and dock, oak, ivy, mistletoe, aspen, woodbine, and scores of others have been adapted to modern spelling. Rowan tree may be derived from "run," a secret, or charm, and doubtless indicates the remedies believed at one time to be found in rowan branches as witch, lightning and demon dispellers. Hollyhock is "holyhock," a "hoc" or mallow that was first brought to England from the Eastern, or "holy," countries. The meadowsweet is apt to be disappointing because of the hopes raised by the plant's common name; Dr. Prior, however, states that this is a corruption of "meadow-wort," or honey-wine herb, alluding to the fact which is mentioned in old herbals that "the flowers mixed with mead give it the flavor of the Greek wines." The derivation of marigold is somewhat obscure; in the "Grete Herball" of the sixteenth century the flower is spoken of as Mary Cowles, and by the early English poets as "gold"; as the first part of the word might be from the Anglo-Saxon "mere," a marsh, it seems possible that the entire name may signify "marsh-gold," which would be an appropriate and poetic title for this shining flower of the bogs. Beech is Anglo-Saxon "boc," the origin of the word "book," because the ancient Saxons and Germans wrote their runes on pieces of beechen board.

The French contributions to plant names, though many, have been mainly in the adaptation of Latin words. Mignonette, however, is a word of their own coining, and is the diminutive of "mignon," darling; it is said that the soldiers of Napoleon impulsively bestowed the name upon the plant as soon as they discovered it blooming in Italy. Fleur-de-lis is "flower of the lily," though some claim that it really means "flower of the Louis," it being the chosen emblem of the French kings of that name. Sainfoin is another one of their words and means "wholesome hay"; the name is derived from this legend: When the Infant Jesus was lying in the manger this plant was found among the grass and herbs which composed His beds; it had opened its little flowers and formed a wreath about His head. Grape has the same French root as "grappin," a kind of hook; the sense perhaps came from the clutching tendrils of the plant.

The most familiar German plant name in general use is the Edelweiss, or "noble-white," a small aster of the Alps. Cranberry is

"kranishberre," and is so called because at the time of blossoming the stem, calyx and petals are fancied to resemble the neck, head and bill of a crane; probably its favorite habitat, a wet marsh, has some influence on the name, as well, the plant and the bird frequenting such places. Dodder is paralleled in the German "dotter," the yolk of an egg, and is probably derived from it.

The Danish language contributes fir, gherkin, bilberry, and Dannebrog. Dannebrog is the name of the national flag of Denmark, and the Dannebrog poppy has red flowers which bear a white cross at the base of their petals. The Dutch "boekweit," or "beech-wheat," from the shape of its seed to that of beechmast, becomes in English buckwheat. Hop is closely related to "hoppe," Hollandese for our corresponding verb and refers to the plant's rapid growth and climbing habits. The Swedish language has given us rotabagge, also krusbar (gooseberry) from "krusig," crisp.

Whin is Welsh, dulse and shamrock are Gaelic, belladonna (beautiful lady) is Italian. The Portuguese are said to have named the coco, which is their word for a bugbear, or an ugly mask to frighten children, and it refers to the ugly monkey-like face at the base of the nut.

Spanish names are common in the West and South, such as madrono, manzanita, vanilla, sarsaparilla, yerba, granadilla, and from native Indian names they adapted yucca, guava, banana, papaya, potato, sapodilla. Genuine Indian names are hickory, puccoon, catalpa, tamarack, maize, pipsissewa, petunia, with slight variations; while the natives of Mexico and the West Indies are sponsors for tule, ipecac, zapote, tacamahac, cacao, mescal, mahogany, tobacco, persimmon and cashew. Squash, as applied to the vegetables we know by that name, is the Massachusetts Indian "askutasquash," raw, green, immature, applied to fruit and vegetables used green or uncooked; it has no relation to the old French word "esquaissier," which becomes in English "squash," meaning anything soft and easily crushed, and in Shakespeare's time given to the unripe pods of the pea.

"Not yet old enough for a man, nor young enough for a boy; as a squash is before 'tis a peascod."—"Twelfth Night."

Tamarind, senna, barberry, artichoke are Arabic in origin; Benjamin-bush, one name for our spice-bush, is not so termed in honor of any person, but is the Arabic name of such plants, "benzoin," corrupted. The Hebrew "esop," after traveling down through the Greek, Latin, French and Middle English, is known in our day as "hyssop"; the Hebrews also gave us cinnamon, cassia, ebony, balm and balsam. The Persians called the tulip "dulband," a turban;

lilac, jasmine and pistachio are also Persian in origin. Curry and mango are Tamil; bamboo, upas, sago and guttapercha are Malay. Tea is Chinese, of course, and so is kumquat, the name of a kind of orange; ginseng, or jin-chen, signifies "like a man," from the fancied resemblance of the forked roots of some specimens to the human form.

Interesting bits of geography are tucked into many a plant name. The guelder-rose, or snowball, was supposed to have come from Gelderland, a province of Holland. The currant is in French "corinthe"; "raisins de Corinthe" were the small seedless raisins first imported from Greece, and the ribes fruit is named from its resemblance to these Corinthian raisins. It is thought that rhubarb was named by the Greeks from the River "Rha" (the Volga), and "barbarous," foreign. Indigo comes from India; candytuft from Candia, dittany from Mount Dictæ in Crete, where it is very abundant; spruce from Prussia, either because it was first known as a native of that kingdom or because its sprouts were first used there in making spruce beer. Chestnut is from Castana, a city of Asia Minor, where chestnut trees grew in abundance and whence they were introduced into Europe. Oswego tea, St. Augustine grass, Cedar of Lebanon, Kenilworth ivy, Lombardy poplar, African almond, Swiss pine and such combinations plainly indicate the locality where the plant is common, or the country where first discovered. The Jimson weed was originally Jamestown weed; it is an Asiatic member of the nightshade family, naturalized in this country; it was so associated with civilization as to be called "whiteman's plant" by the Indians, and made its appearance very early in the seventeenth century, if not directly upon the founding of Jamestown.

Gerard, an old-time herbalist, indignantly declares that the grass of Parnassus has been described by blind men, not "such as are blinde in their eyes, but in there understandings, for if this plant be a kind of grasse then may the Butterburre or Colte's-foot be reckoned for grasses—as also all other plants whatsoever." But if it covered Mount Parnassus, the hill sacred to Apollo and the Muses, with its delicate veiny blossoms, as abundantly as it does some moist meadows, the ancients may have reasoned that a plant almost as common as grass must somehow partake of its nature—provided, of course, that they did name the plant.

"Plant me this grass beside my homely fount,

I shall not care to climb Parnassus' mount."—John Finley.

THE NAME TO FIT THE PLANT.

Mark Twain, in his translation of "Eve's Diary," presents to the world our foremother's brief record of how easy she found her

task of naming the newly created things all about her, since she no sooner looked at a thing than she knew just what it should be called. Hundreds of our plants must have been the inspiration of their own names in the same way, since peculiarities of root, leaf, stem, blossom or seed broadly hint the names they should bear. Buttercup, sticktight, twisted-stalk, snowball, goldenrod, coneflower, bloodroot, milkweed, pink, crinkleroot, bunchberry, trumpet-flower, touch-me-not, red-bud, beard-grass, arrowhead, sneezeweed, bluebell, sickle-pod—all seem self-named.

“And then the speedwell blue
Cheers with its two kind words.”—Anon.

“And the fragile speedwell blue
Bade us on our journey haste.”—Florence Tyler.

The roots of the goldthread are yellow and fine; those of the dentaria and toothwort are knotted and scaled in a toothlike manner; those of the rest-harrow are long and tough enough to have arrested many a drag and plow. Hepatica is New Latin derived from the Green word for liver; it is also called liverwort, both names referring to the shape of the lobed leaves. The compass plants have leaves or branches disposed to arrange themselves on the axis so as to indicate the cardinal points of the compass:

“Compass-plants to northward turning.”—Lucy Larcom.

“Look at this vigorous plant that lifts its head from the meadows,
See how the leaves are turned to the north, as true as the magnet;
This is the compass-plant, that the finger of God has planted
Here in the houseless wild, to direct the traveler’s journey.”

—Evangeline.

The hobble-bush is of struggling growth, and its reclining branches, which often take root in the ground, have suggested its popular names of hobble-bush and wayfaring tree. The ice-plant is named for its glittering foliage; the knot-grass, or “ninety-knot,” has jointed stems; hardhack is a woody shrub more difficult to cut than the other meadowsweets to which it is closely related; bass-wood has overthick layers of bast in its composition; nine-bark separates into many thin layers; the stems of the crossvine often show a conspicuous X in a transverse section of the wood; and many another plant has as apt a name. What could be more appropriate than “herb-impious”; it is a member of the aster family and the successively overtopping flower heads fancifully suggest undutiful children trampling over their humble parent stems. Wordsworth says of the “love-lies-bleeding”:

"You call it 'Love-lies-bleeding,'—so you may,
Though the red flower, not prostrate, only droops,
As we have seen it here from day to day,
From month to month, life passing not away;
A flower how rich in sadness!"

The mountain-laurel is called calico-bush, whose red-marked corollas, to an imaginative mind, might suggest the cheap cotton prints sold in the shops. Nasturtium is a combination of "nasus" (nose) and "torguere," to twist or torture, in allusion to its causing one to make a wry face. The skullcap is a mint, the calyx of the flower, when inverted, having the appearance of a helmet with the visor raised. In the whorl of leaves that surmount its cluster of pendant bell-shaped flowers at the top of its stalk, the crown-imperial bespeaks itself. Ladies'-tresses is an orchid with small flowers that grow about the spike in spiral lines, giving a braided effect; they are also called ladies'-laces from the fancied resemblance between these twisted clusters and the lacings that play so important a part in the feminine toilet. Love-in-a-mist, or still better, love-in-a-puzzle, is also called St. Catherine's flower and "devil-in-a-bush," due to the appearance of the flowers with their finely dissected bracts.

"This herb, I think,
Grows where the Greek hath been. Its beauty shows
A subtle and full knowledge, and betrays
A genius of contrivance. Seest thou how
The fading emerald and azure blent,
On the white petals are enmeshed about
With delicate sprigs of green? 'Tis therefore called
Love-in-a-mist."—Robert Bridges.

Thoreau, however, takes exception to "painted cup": "I do not like the name. It does not remind me of a cup, rather of a flame when it first appears. It might be called flame-flower, or scarlet tip." But the name seems destined to last; indeed, it is too pretty, even if not wholly descriptive, to be lost. People will see likenesses and will coin names, no matter what the more exact scientists would wish, and so the list goes on—puffball, everlasting, lady's-eardrop, moccasin flower, bleeding heart, Indian pipe, Dutchman's breeches, shepherd's purse,—it seems unending. Morning-glory, evening-primrose, four-o'clock, Christmas rose, pasque flower, Easter lily, Pinkster flower (Dutch for Pentecost), mayflower, are named from their times of blossoming; dayflower from their transitoriness of one blossom's life; wallflower, ground ivy, bog-cotton, mountain lover,

prairie lily, water-cress, wood nettle, Alpine rose, indicate favorite habitats. Such designations are very common, particularly those of a geographical nature. Some plants have been named from their uses. The toothbrush tree of the Old World is a good example, clusters of its twigs being sold for toilet purposes. Dogwood is said to have no reference to the animal, but to the "dogs" or wooden skewers made of the wood. The spindle-tree, arrow-wood, bed-straw, soapwort, wax-myrtle are testimonials to the fact that a thing may be both ornamental and useful. The banyan was so called by the English in allusion to the use of the space sheltered by the tree as a market place for the native merchants or "banians." The broad leaves of the butterbur were once used in England for wrapping up pats of butter.

Medicinal value, supposed if not actual, has had its influence in plant-naming. Clary is said to mean "clear-eye," from its effect; so, too, the eye-bright. Comfrey is from the Latin "conferva," meaning "to heal" or "to grow together," from its supposed healing power; from "consolida," "to make solid," comes its other name of consound. Potentilla, another name for the cinquefoils, means "potent"; tormentil comes from "torment" because believed to allay pain; sage is "salvus," or "saved," in allusion to its healing properties; and colicroot, goutweed, throatwort, whitlow grass, spleenwort, kidney vetch, feverfew and pleurisy root are said to have curative effects on the diseases whose name they bear. Heal-all, or self-heal, was used in England as an application to the wound received by rustic laborers, as its common names, carpenter's herb, hook-heal and sicklewort, imply. That the French had a similar practice is proved by an old proverb of theirs to the effect that "No one wants a surgeon who keeps Prunella." Vervain has a time-honored name of "simpler's joy," from the remuneration which this popular plant brought to the simplers or gatherers of medicinal herbs. The boneset is one of the few herbs whose efficacy has not been overrated, as one of its names, thoroughwort, testifies. The Indians called the plant "ague-weed." The botanist Millspaugh says: "It is prominently adapted to cure a disease peculiar to the South, known as 'break-bone' fever, and it is without doubt from this property that the name 'boneset' was derived."

Herb Robert, one of the geraniums, was said to have been of great value in curing a disease known as "Robert's plague," after Robert, Duke of Normandy; in some of the early writers it is alluded to as the "holy herb of Robert." The ugly common name of "shin-leaf" for the pretty pyrola arose from an early custom of applying the leaves of this plant to bruises or sores, the English peas-

antry being in the habit of calling any kind of plaster a "shin-plaster" without regard to the part of the body to which it might be applied. Motherwort, a bitter Old World mint, was cultivated in gardens as mother's first aid to the injured. Castor oil gets its name from confusion with castoreum, a substance obtained from the beaver and used in medicines and perfumeries.

The tway-blade, twinflower, trefoil, trillium, cinquefoil, milfoil, introduce the most elementary mathematics into flower-names; while the other end of this noble science, astronomy, has contributed terms in frequent use—aster, shooting star, blazing star, star-grass, sunflower, heliotrope, turnsole, sundrops, sun-tree, moonflower, moon-seed, moon-fern, daisy or "day's eye"—the number is comparatively small, yet not to be wholly slighted.

Animal-named plants crowd the pages of botany. Frequently these terms have resulted from some fancied resemblance; in other cases the name implies food value, or medicinal or poisonous effect; sometimes the animal prefix means "large, coarse, worthless or false." Cowslip is a variation of "cow's-slop"—the bits of butter that have been scattered about by the cow. Oxlip is a modification of the word, and implies that the one is mated by the other, both being members of the primrose family and closely related:

"As cowslip unto oxlip is,
So seemed she to the boy."—Tennyson.

"The Cowslip then they couch, and th' Oxlip for her meet."
—Michael Drayton.

Cowtree is a term applied to any of the several trees yielding a rich milky juice, whether edible or not; the cow-pea is cultivated for forage; the cow-poison and the cow-bane are injurious to stock; and some large coarse forms of different plants are cow-parsley, cow-parsnip and cow-chervil. And so we have, among the multitudes of this class of names: bearberry, oxeye, elephant trunk, skunk cabbage, horse-mint, colt's foot, mustang-grape, deer-grass, sow-thistle, dog-violet, wolfsbane, foxglove, catbrier, tigerlily, harebell, mouse-ear, goat's beard, moosewood, hedgehog cactus. Many harmless plants have been given reptile names — rattlesnake plantain, snakemouth, addertongue, alligator-bonnets, turtle-head, lizard's-tail. Among the insect-named flowers are bee larkspur, fly orchid, butterfly pea, catchfly, moth-mullein (the blossoms appear as though a number of canary yellow or purplish white moths had alighted on the stalk for a moment's rest), fleabane and lousewort, both named from the belief that they were objectionable to insects, and worm-wood.

The Scythian lamb is a strange freak; it is an immense tree fern with a shaggy root-stock above ground, which at a distance resembles a small woolly sheep lying at the foot of the plant. The bee orchis has "a lip in form and color so like a bee that any one unacquainted with it would take it for a living bee." Some years ago a writer, describing the toad-orchis, amusingly spoke as follows of its eccentricities: "Let the reader imagine a green snake to be pressed flat like a dried flower, and then to have a row of toads, or some such speckled reptiles, drawn up along the middle in single file, their backs set up, their forelegs sprawling right and left and their mouths wide open, with a large purple tongue wagging about convulsively, and a pretty considerable approach will be gained to an idea of this plant, which, if Pythagoras had but known of it, would have rendered all arguments about the transmigration of souls superfluous." The adder-tongue lily is probably named from the markings of its leaves; Mr. Burroughs has suggested "fawn lily" for the plant instead, because a fawn is mottled and because the two leaves stand up with the alert, startled look of a fawn's ears. Crab-grass and crab-apple probably get their names from the animal, one having creeping habits and the other a pinching or puckering taste. Eel-grass and pickerel-weed are of course water-loving plants, but the shadbush is so named from the time of its flowering, the season when the shad run. Of course, the birds have not been missed, either; there's larkspur, crowberry, wake robin, cuckoo-bread, old hen and chickens, cock's-comb, duckweed, goosefoot, peacock-flower, cockatoo-bush, cranesbill, pigeonwood, ostrich-egg-gourd, sparrowwort, emu apple, *ad libitum*. The name of the columbine is derived from "columba," a dove; but its significance is disputed. Some believe that it was associated with the bird-like claws of the blossom, but Dr. Prior maintains that it refers to their resemblance of its nectaries to the heads of pigeons in a ring around a dish, a favorite device of ancient artists.

"O columbine, open your folded wrapper,

Where two twin turtle-doves dwell."—Jean Ingelow.

Both swallowwort and chelidonium, two names for the same plant, are from the Greek word for swallow; Gray says because its flowers appear with the swallow; but if we turn to Gerard we read that the title was not bestowed because it "first springeth at the coming of the swallowes, or dieth when they go away, for as we have saide, it may be founde all the yeare; but because some holde opinion that with this herbe the dams restore sight to their young ones, when their eies be put out." The hawkweed is said, by folklore, to be

able to restore the lost strength of members of the falcon family, hence the name. The corydalis is the ancient Greek name for the crested lark, and refers to the crested seeds of this genus. Then, too, a plant is sometimes called after another vegetable it resembles in some way. The willowherb is a member of the evening-primrose family, with slender, willow-like foliage. And there is the chestnut oak, the cherry laurel, the rose geranium, the grape hyacinth, strawberry-tree, false indigo, and many plants with the distinguishing term American, African, and so on.

Plants have all sorts of pet names; it would require pages to enumerate them all. The yellow lady-slipper is the whipporwill's-shoe; the dog-violet is the cuckoo's-shoe; the Creoles call the yellow tangled stems of the dodder "angel's-hair"; mullein is velvet plant and witch's taper; the dandelion is the peasant's clock; sorrel is bread-and-cheese; toad-flax is bread-and-butter; one of the narcissi having two shades of yellow is "butter-and-eggs"; the cuckoo-pint is "lords and ladies," the purple-tinged ones being the lords and the light green ones the ladies; Dutchman's breeches are "white-hearts"; pitcher-plant is "hunter's-cup" and "side-saddle flower"; the bitter yarrow is "old man's pepper"; pansy is "kiss-me-quick." Throughout Europe the wood sorrel bears the odd name of "hallelujah," on account of its flowering between Easter and Whitsuntide, the season when the Psalms sung in the churches resound with that word. Lady's smock is termed "bread-and-milk" from the custom of country people having that simple fare for breakfast about the season the flower first comes in; it is also cuckoo-flower, meadow-cress and milkmaid. The ribwort plantain is the "chimney sweep," as the blackened stalks of the ripe seed-heads clearly indicate. In England they call the hawkweed "Grimm the Collier," on account of its black hairs and after a comedy of the same title which was popular during the reign of Queen Elizabeth. The snowdrop has been nicknamed "Fair Maid of February" from its early blossoming. The foxglove is the digitalis (French for finger-stall or thimble), and its nicknames are fairy finger, finger flower, finger root and fairy bell.

"So our old Mullein, here of deference scant,
Struts 'round in England as 'The Velvet Plant.'"

—Will Carleton.

"Many, many welcomes,
February fair-maid,
Ever as of old time,
Solitary firstling,

Coming in the cold time,
Prophet of the gay time,
Prophet of the May time,
Prophet of the roses,
Many, many welcomes,
February fair-maid."—Tennyson.

HARRIETTE WILBUR.

Duluth, Minn.

SIDNEY LANIER AND HIS POETRY

ALTHOUGH the poems of Sidney Lanier are fairly familiar to readers of poetry, it can hardly be said that he has really come into his own. He was no intellectual pauper whose ready rhymes and facile fecundity foredoomed him to neglect; neither was he a "jingle-man" (in Emersonian phrase) with whom sense was subservient to sound. He was a true poet, touched by the sacred fire, who strove in his brief hour to utter worthily the thoughts and feelings which stirred his ardent soul. Like Churchill, "the marvelous boy who perished in his pride," and Keats and Shelley, he died young, but not before he had won from fame a niche among the immortals. When he died, in 1881, he had reached only his thirty-ninth year, and almost half of his short life was a vain struggle against disease. The malady that sent Keats to an early grave and condemned Robert Louis Stevenson to exile in Southern seas marked Lanier for its prey while he was a prisoner during the Civil War; and the hardships which he then endured, with the privations of his later life, no doubt hastened its progress. On his return home after the war he had the opportunity of taking a place in his father's law office, but the prospect was abhorrent to him.

"How can I," he wrote, "settle myself down to be a third-rate struggling lawyer for the balance of my little life as long as there is a certainty almost absolute that I can do some other thing so much better?" The "other thing" which Lanier felt it would be better for him to do was to devote himself to literature. He felt indeed that in following his literary bent he was consecrating himself to a noble calling. Lanier was not deceiving himself in choosing his path in life. Of course, no sane man sits down to write poetry for a living. The poet sings because he must; he thinks in numbers and the numbers come. Fugitive verse wins recognition slowly. Goldsmith has told us how poetry "found him poor and kept him so." Lanier's experience was no exception. It is a heroic figure that he presents to the world—a brave man fighting against sickness and poverty. He felt no bitterness, however, even though he spoke of

"The praise a poet wins too late
Who starves from earth into a star."

We can forgive him for punning when he could jest, even grimly, at his misfortunes. His first success came with the long

poem entitled "Corn," which speedily brought him into notice. Meanwhile, and even to the last, he had to work hard to keep from starving. Being an accomplished flautist, he found work in a symphony orchestra. He also gave a series of lectures, published some essays on poetry and music, and edited a few classics for the booksellers. These included boys' editions of the "Chronicles of Froissart," "Legends of King Arthur," "The Mabinogion" and "Percy's Reliques." He even prepared for a railroad company a guidebook to Florida, whither he had gone in search of health. The trade of authorship ever has been a precarious one. As Sir Walter Scott shrewdly said, it is a useful walking cane, but a poor staff. Literary history is full of the miseries of those forced to depend on it for support. From the days of Homer (who sang in the streets) to our own he who spins his brains for bread will often go hungry if he would keep his independence and self-respect. It was not until the appearance of this poem entitled "Corn" that the public awoke to the fact that a true poet was amongst them whom they had hitherto failed to recognize. It is a long poem—too long for quotation. Its theme is a simple one, but its phrasing is masterly. Gazing on a Georgian field of waving corn, the poet contrasts its promise of plenty, "The slow reward of patient grain," with the uncertain harvest of the cotton field, whose planter "sowed his heart with hopes of swifter gain." He points the moral with telling effect, and closes with

"Visions of golden treasures of corn—
Ripe largesse lingering for some bolder heart
That manfully shall take thy part,
And tend thee,
And defend thee,
With antique sinew and with modern art."

Having won public attention, Lanier held it to the end. Each succeeding poem secured his reputation, for although he wrote almost constantly, he had the artist's soul and strove for perfection. He did not, however, make it a fetich. He did not polish to attenuation, neither did he neglect the *labor limae*. He had a high idea of the function of poetry. He sought by its means to kindle an enthusiasm for beauty, purity, nobility of life. These he regarded as the poet's first duty to teach and to exemplify. His theory of poetry is more correct than that of Poe, who held that poetry has no concern whatever with duty or with truth. Lanier believed that in poetry truth is beauty and beauty is truth; but he had an even

higher conception of beauty than Keats had, for he speaks of the "beauty of holiness." Many of his poems reveal the religious turn of his mind and the rapture with which he looked upon the work of the Creator in the beauties of nature. A true lover of Nature, Lanier devoted several poems to her worship. They afford abundant proof of his fidelity of observation and power of vivid word-painting.

Here is a little gem from a poem entitled "Clover," inscribed to the memory of Keats:

" 'Tis a perfect hour.
From founts of dawn the fluent Autumn day
Has rippled as a brook right pleasantly
Half-way to noon; but now with widening turn
Makes pause, in lucent meditation locked,
And rounds into a silver pool of morn,
Bottom'd with clover fields. * * *"

The impetuous onrush of the mountain stream is admirably suggested in the "Song of the Chattahoochee":

"Out of the hills of Habersham,
Down in the Valleys of Hall,
I hurry amain to reach the plain,
Run the rapid and leap the fall,
Split at the rock and together again
Accept my bed or narrow or wide,
And flee from folly on every side
With a lover's pain to attain the plain
Far from the hills of Habersham,
Far from the Valleys of Hall."

The atmosphere of the country, its sights and sounds, come to us as we read these few lines from a poem entitled "The Waving of the Corn":

Unseen, the farmer's boy from round the hill
Whistles a snatch that seeks his soul unsought,
And fills some time with tune, howbeit shrill,
The cricket tells straight on his simple thought—
Nay, 'tis the cricket's way of being still;
The peddler-bee drones in, and gossips naught:
Far down the wood, a one-desiring dove
Times me the beating of the heart of love:
And these be all the sounds that mix each morn
With waving of the corn.

Characteristically fanciful is "Tampa Robins." It is worthy of a musical setting:

The robin laughed in the orange-tree:
Ho, Windy North, a fig for thee:
While breasts are red and wings are bold
And green trees wave in globes of gold,
Time's scythe shall reap but bliss for me—
Sunlight, song and the orange-tree.

Burn, golden globes in leafy sky,
My orange-planets; crimson I
Will shine and shoot among the spheres
(Blithe meteor that no mortal fears)
And thrid the heavenly orange-tree
With orbits bright of minstrelsy.

If that I hate wild winter's spite—
The gibbet trees, the world in white,
The sky but gray wind over a grave—
Why should I ache, the season's slave?
I'll sing from the top of the orange-tree,
"Gramercy, winter's tyranny."

I'll South with the sun, and keep my clime;
My wing is king of the summer time;
My breast to the sun his torch shall hold,
And I'll call down through the green and gold,
"Time, take thy scythe, reap bliss for me;
Bestir thee under the orange-tree."

In the little poem "Ireland," written at the time of the Irish famine in 1880, Lanier sent this cheering message to that land of so much suffering and sorrow:

Heartsome Ireland, Winsome Ireland,
Charmer of the sun and sea,
Bright beguiler of old anguish,
How could Famine frown on thee?

As our Gulf Stream drawn to thee-ward,
Turns him from his northward flow,
And our wintry western headlands
Send thee summer from their snow,

Thus the main and cordial current
 Of our love sets over sea,—
 Tender, comely, valiant Ireland,
 Songful, soulful, sorrowful Ireland,—
 Streaming warm to comfort thee.

His warm, vibrant nature was stirred to sympathy with suffering and sorrow wherever found. His first book, "Tiger Lilies" (a rather jejune affair), was the outcome of his experiences during the Civil War, in the course of which, as already mentioned, he was made prisoner.* It is in part an allegory in which he likens war to "an enormous terrible flower, with damp shade and unhealthy odour." So deeply did the *insania belli* impress him he "could wish that it might perish utterly out of sight, and life, and memory, and out of the remote hope of resurrection, for ever and ever." *Alta sedent civilis vulnera dextrae.*

"Thoughts that fray the restless soul" troubled Lanier regarding the mystery of man, and the Divine ordination of things which will one day be made plain to all:

"* * * How God can dumbness keep
 While sin keeps grinning through His house of Time,
 Stabbing His saintliest children in their sleep,
 And staining holy walls with clots of crime?
 Or, how may He whose wish but names a fact
 Refuse what miser's-scanting of supply
 Would richly glut each void where man hath lacked
 Of grace or bread?

Genuine in impulse, fervid in temper, "his song was only living aloud," and it was the flame of the fire that consumed him. "A thousand songs are singing in my heart," he wrote in the year before he died, "that will certainly kill me if I do not utter them soon." Though he loved life, and sought to prolong it by changes of climate, he did not fear death, as is beautifully shown in the little lyric, "The Stirrup-Cup," written when he was in Florida:

Death, thou'rt a cordial old and rare;
 Look how compounded, with what care!
 Time got his wrinkles reaping thee
 Sweet herbs from all antiquity.

* * * * *

* While confined in the Federal prison at Point Lookout he became acquainted with Father Tabb, the Maryland poet-priest, who was also a prisoner there. They became firm friends.

Then, Time, let not a drop be spilt:
Hand me the cup whene'er thou wilt;
'Tis thy rich stirrup-cup to me,
I'll drink it down right smilingly.

Knowing that his years were to be few, Lanier strove to make good the faculties that he possessed. He lived a crowded, strenuous life, each hour filled with his efforts to prove himself worthy of what he believed to be his destiny—to win the poet's crown.

There can be little doubt but for the tragic conditions of his life he would have struck a chord and sounded a note that would forever echo in the hearts of men. His swan song, "Sunrise," has an impassioned fervor of utterance that only needed a serener atmosphere for self-criticism to have made it a perfect poem. He had the critical faculty in a high degree, as can be seen in his University lectures. In "The Crystal" his winged shafts of pointed criticism find their mark in Shakespeare, Homer, Dante, Milton, Aeschylus, Lucretius, Emerson, Keats and Tennyson. Great Homer nodded, and not even Shakespeare and Dante are so sacrosanct that we may not be shown their imperfections. Even when we are unable to share his point of view, we have to admit the force of his reasoning, which is, in the main, almost invariably sound. All his life he was an omnivorous reader. He absorbed and assimilated a vast deal of literature in many languages, which gave him confidence and poise without impairing his originality. *Abeunt studia in mores.*

He was no mere worker for effects. His sincerity gleams on every page. He knew that a poet must be a student of men and things, not a dreamer. That poetry must be a criticism of life. That the end of Art is not in itself, but in what it teaches; for the true poet cannot fail to be a teacher. He indicated exactly the flaw in Poe when he said that he did not *know* enough. "He needed," said he, "to know a great many more things in order to be a great poet." A great poet Poe is not, of course; neither is Lanier; but he strove sedulously in the little time allowed him to be worthy of the poet's high vocation. "Unless," he says to the artist, "unless you are suffused with truth, wisdom, goodness and love, abandon the hope that the ages will accept you as an artist." An artist Lanier undeniably was. That he hoped for immortality in his verse is plain, for he gave conscientiously of his best, not hesitating to live laborious days. "The artist's market is the heart of man," he said. If this were the whole truth, many who rank as poets are not poets at all. It is, of course, a supreme test of a poet to touch the heart while satisfying the intellect. The topmost heights of poetry are reached only by the great. Among the lower slopes there is much

to charm and gladden us if we do not disdainfully pass by. Lanier has vital human interest, though his appeal is more directly to our delicate perceptions, our artistic instincts. He stirs us mostly from without, while he pleases our ear and delights our fancy. Earnestness, spirituality and imagination unite in his work and give it the tone and color which distinguish it. Those who fail to read him miss much pure pleasure.

P. A. SILLARD.

New York.

JACQUES CARTIER.

ONE DAY when Francis I., King of France, was sitting with his courtiers and listening to their account of the progress made in the New World by English and Spanish enterprise he angrily exclaimed: "What! how coolly they divide among themselves the vast territories of America, without allowing me to share with them as a brother. I would like to see the article in Father Adam's will that excludes me and bequeaths to them this vast inheritance." Thus, it came to pass that we are indebted to a royal outburst of wounded pride for the first two voyages of Jacques Cartier, in the name of France, and the exploration of the country known as New France, from the Gulf of St. Lawrence to Montreal.

The explorations of Verazzano,¹ though undertaken at the command of Francis I. of France, in the hope of depriving his rivals, the other sovereigns of Europe, of all the glory and some of the wealth, at least, to be found in the New World, did not result very profitably to France. Then came a period of civil and foreign wars and no end of misfortunes to the French king, so that he had little time to give to far-off America. Ten years elapsed after the cruise of Verazzano along our Atlantic coast before France was again in a position to follow up the work of the Italian explorer. Thus it was not until 1534 that Francis I. was able to fit out two vessels, under the command of Jacques Cartier, to make further explorations, and, if possible, triumph over former explorers by discovering that long sought for, but never to be found, passage to India. Jacques Cartier sprang from a family of intrepid sailors, for which the port of St. Malo, in France, had become celebrated throughout all Europe. He was born in 1491, some day between June 7 and December 23; the church records are missing, hence it is impossible to state the exact day. It is still more difficult to fix with certainty the place of his birth. The town of St. Malo, St. Servan and Paramé, two neighboring localities, claim, with equal probability, the glory of having been his birthplace. His parents were Jamet Cartier and Josephine Jansart, both devout Christians.

Beyond all doubt, Jacques Cartier is a native of the vicinity of St. Malo. His childhood was spent in sight of the vast ocean; his infant footsteps were first tried along the golden sands along the strands that stretch from the fortress of St. Anne de Bretagne to

¹ A brother of Verazzano, Hieronimo by name, in 1529 made a map of the world, a copy of which may still be seen in Rome in the College of the Propaganda. The discoveries of Verazzano are indicated upon it.

Point Cancale. It was amid scenes like these that he had his first dreams, that culminated in the great undertakings that the future had in store for him. The dreams of his early youth were soon followed by a period of practical life—laborious and full of hardships. It is conjectured that before his twenty-first year he had already crossed the Atlantic and set foot on Newfoundland. It is also claimed that he had made a voyage to Brazil, as he spoke the Portuguese language fluently. In April, 1520, Cartier married Catherine des Granges, of a prominent family of St. Malo. The wedding is supposed to have taken place in the Cathedral, and, though the bride was not able to write her own name, she was none the less a good wife and a good housekeeper.

Cartier was early in life filled with a desire to explore the coasts of the New World, about which he had heard so much, and in the course of time he attracted the notice of Admiral Philippe de Brion-Chabot, who recommended him to the king as a suitable person to carry on His Majesty's design of placing France on an equality with her European maritime rivals. Cartier shared this desire, for he is known to have expressed regret that a great maritime nation like France was having no share in the wealth and glory of the New World. Great was his joy, then, when he found himself in command of an expedition to explore the coast of North America and "to determine a northwest passage to India." His fleet consisted of two small vessels of sixty tons each and which he found no difficulty in manning, because the fisheries along the North American coast now offered greater and more profitable inducements to the sailor than its exploration. On April 20, 1534, Cartier mustered his crew and found that he had sixty men. With these he crossed the ocean and steered for the coast of Newfoundland, with which some authorities think he was already acquainted, and which he reached after a voyage of twenty days, in such rough weather that, as soon as he reached Cape Buonavista (May 10), on the east coast, he was obliged to make for a harbor in which to make necessary repairs. This done, he turned northward along the coast and, sailing through the Straits of Belle Isle, discovered the mainland of Canada, which he took possession of "for Christ and the King of France" by solemnly planting a large cross and unfurling, with military honors, the white banner of France. Upon the cross he placed the inscription: "Vive le Roi de France." It may not be amiss to maintain that on his way to this point he touched at several places and noted on his way the islands of Bryon and Madeleine and then continued his way to the south.

Shortly after raising the cross referred to above Cartier came in contact with some Indians, but the aspect of the country was

so uninviting that he changed his course for a more northerly one, and for the coast of Newfoundland, till he reached the vicinity of Cape Breton, and he seems to have been the "first to define the coast." Turning now to the west, he soon sighted the shores of Prince Edward's Island. On July 2, having changed his course to the west, he entered a large bay which he called Chaleur Bay, on account of the great heat experienced in that indentation. A few days later he entered Gaspé Bay, which he mistook for the mouth of a great river. At the entrance of the bay he planted another cross bearing the inscription: "Vive le Roi de France," to indicate that he had taken possession of this region in the name of religion and of the French sovereign. While here Cartier exchanged presents with the Indians. Passing Anticosti Island he finally turned backward along the cheerless coast of Labrador, and thence emerged once more into the great ocean. His disappointment at having spent some two months and a half in cruising around the coast waters of the New World and not finding any indication of a northern passage to Cathay may be readily imagined, but "he had done more, perhaps, to map out the Gulf of St. Lawrence than any of his predecessors, and he had laid the foundation for future cartography."² Thus on the feast of St. Peter he was in the strait between Anticosti and Labrador, and called it St. Peter's Channel. Fearing to spend the winter in so cold a region and his supplies being well nigh exhausted, Cartier decided to return to France. On August 15, the feast of the Assumption,³ Mass was celebrated by the chaplain of the expedition, the first, perhaps, ever heard in these regions. It was an act of thanksgiving for the safety of the expedition and a prayer for a safe voyage home.

Cartier arrived at the port of St. Malo on September 5, after an absence of six months. His expedition had not been as successful as he had hoped it would have proved, but he was by no means discouraged by the report he had to make to his superiors. There was enough in it to justify his own enthusiasm for the future and to hold out hopeful prospects to his sovereign. Admiral Chabot again espoused his cause, explained the condition of the explorer's affairs to the king and soon succeeded in securing from him a commission authorizing Cartier to complete his exploration of Newfoundland. This commission was dated October 30, 1534, and allowed him fifteen months in which to accomplish his purpose.

On Pentecost Sunday, May 16, 1535, the pious captain and his companions repaired in procession to the Cathedral, where Mass was

² "Cartier to Frontenac," by Justin Winsor, 1894.

³ "Jacques Cartier and His Successors," by Rev. B. F. De Costa, D. D., in Winsor's "Narrative and Critical History." Vol. IV., p. 50.

celebrated and all received Holy Communion. At the close of the Mass Cartier and his followers knelt before the altar and received the blessing of the Bishop of St. Malo. Three days later this intrepid mariner sailed on his second expedition. This time he had three ships, the Great Hermine, of about one hundred and twenty tons, under his immediate command; the Little Hermine, of sixty tons, commanded by Macé Jalobert, and a small galley, the Ermerillon, commanded by Jacques Maingart. Cartier insisted that this expedition was destined to bring new souls into the Church to take the place of those which had been led away by the so-called Reformation. His progress across the ocean was slow and tedious, owing to head winds and violent storms, and for a time his ships became separated; but finally, on July 26, the three vessels were reunited at the port of White Sand, the place of rendezvous appointed before the separation. From here the fleet steered westward along the coast of Labrador, until finally it reached a little bay opposite the island of Anticosti, which Cartier named Assumption Island. After exploring this coast Cartier arrived on September 1 at the mouth of a river which Taiguragny and Domayaya told him was the entrance to the kingdom of Saguenay. To the bay opposite to Anticosti Cartier gave the name of St. Lawrence. Subsequently this name was given to the entire gulf and the majestic river nearby. Parkman in his "Pioneers of France and the New World" (p. 202) tells us that Cartier called the St. Lawrence the "River of Hochelaga," or the great river of Canada. He confines the name of Canada to a district extending from the Isle aux Coudres, in the St. Lawrence, to a point at some distance above Quebec. The country below, he adds, was called by the Indians "Saguenay," and that above "Hochelaga." On the map of General Mercator (1569) the name Canada is given to a town, with an adjacent district, in the River Stadén (St. Charles). Lescarbot, a later writer, insists that "the country on both sides of the St. Lawrence from Hochelaga to its mouth bore the name of Canada."

With no pilots save the two Indians captured the previous year, Cartier boldly undertook to sail up this great river, still intent upon finding that long-looked-for passage to the Indies. By September he had reached the Saguenay, bounded by towering cliffs which cast their shadows across the deep and gloomy waters at their base. Continuing his way past the Isle aux Coudres, or Isle of Hazel-nuts, Cartier dropped anchor off a densely crowded island, which, on account of the abundance of grapes that met his eyes, he called the Island of Bacchus, now known as the Island of Orleans. A few days later Cartier came to anchor at the mouth of the little river Ste. Croix, now known as the St. Charles, at the foot of a promon-

tory, on the slope of which was the Indian village of Stradaconna, now Quebec. As Cartier looked up at the heights above him how little did he dream of the grand historical events that were destined to be enacted upon them. And yet seventy-three years later (1608) Champlain transformed that village into the city of Quebec; eighty-two years later (1609) and the fiery Frontenac repulsed the British invaders from its rock-bound shores; but sixty-nine years later (1759) Wolfe defeated Montcalm upon these same heights and ended French rule in Canada. Here, too, in 1775 the gallant Montgomery attempted to storm "the strongest fortified city in America" and fell while fighting heroically at the head of his troops.

On September 14 Cartier's ships dropped anchor under the rocky promontory upon which Stradaconna was built. Indian canoes swarmed around the vessels. After exchanging presents and expressions of mutual friendship with Donnaconna, the chief of the place, Cartier resolved to proceed further up the river to Hochelaga. The chief was sorely displeased, inasmuch as he was anxious to profit by whatever trade could be made with the strangers. Finding that neither persuasion nor threats nor false representations could avail to dissuade Cartier from his purpose, he appealed to his fears and resorted to fantastic processions of members of the tribe attired in the garb of devils, whom they said were emissaries from the god Gudsagny, supposed to dwell at Hochelaga. But the good old Breton sailor was too good a Christian to be frightened by goblins and, leaving a sufficient number of men to guard his ships, he started with a pinnace and two boats manned by fifty men and, on October 2, after a sail of thirteen days, he made a landing some three miles from Hochelaga. Here he built his camp fires and resolved to pass the night. "Just below where now are seen the quays and storehouses of Montreal a thousand Indians thronged with delight, dancing, singing, crowding about the strangers and showering into the boats their gifts of fish and maize, and as it grew dark fires lighted up the night, while far and near the French could see the excited savages leaping and rejoicing in the blaze."⁴ In the morning "one of the principal lords of the city, accompanied by a number of persons," came out to meet the strangers. Cartier, with five gentlemen and twenty sailors, went to visit the Indians in their homes and to see a "certain mountain that is near the city." To this mountain Cartier gave the name of Mount Royal, now, as applied to the city, contracted into Montreal. To what nation these people belonged has been a subject of no little discussion. Some authorities have regarded them as Algonquins, but the Abbé Faillon

⁴ Parkman's "Pioneers," p. 20.

"holds them to be Hurons and the weight of opinion seems to sustain the Abbé."

The Hochelagas (people of the present Montreal) led Cartier into the very heart of their town, where women and young maidens and children gathered around the white strangers, touching their beards, feeling their faces and kissing them heartily, and weeping for joy and imploring Cartier "to touch" their children. Agauhanna, the chief of the village, was now brought forward, borne upon the shoulders of some of his subjects. He was a man of some sixty winters and stricken with palsy. On approaching Cartier he besought him to lay hands upon him, believing that the white men possessed some supernatural powers. In a little while there came from the surrounding cabins a woeful procession of sick, the lame, the blind, the maimed, the impotent, as if, as Cartier says, "God had descended from heaven to heal them." Moved with compassion, as Caleza de Vaca had been in the south on his celebrated journey across the continent, Cartier read the Gospel of St. John, made the sign of the cross over the afflicted and offered up prayers for their recovery and for the salvation of their souls. This done, he "read all the Passion of Our Lord word for word from the prayerbook." This was followed with presents of hatchets, knives, etc., to the men, pewter rings and beads to the women and *Agnus Deis* to the children. The trumpeters now blew blasts upon their trumpets, which filled the ears of the natives with amazement, but also made them all "very merry." Cartier next ascended the "mount" and contemplated the magnificent prospect before him. Mantling forests, broad rivers like the St. Lawrence on the one side and the Ottawa on the other, verdure-covered islands, and at his feet the village of Hochelaga, now the flourishing city of Montreal. More than once has the writer of this paper stood upon that same "mount" and looked down with admiration on the scene before him. The Indian village of Hochelaga has given way to the white man's busy city of Montreal, its quays bristling with its forests of masts which tell of the commercial importance of the Canadian metropolis. Add to this the imposing Cathedral of St. Jacques, the venerable towers of Notre Dame, the historical monuments linking the past with the present, the abbés and members of religious orders one meets on the streets in soutane and "habit," telling of the growth of Christianity and at the same time carrying the beholder back to the old Catholic cities of Europe. Cartier saw what Nature had done for this beautiful region, but the tourist of today sees the result of Cartier's discovery in the development of Christian civilization.

"Which way must I go to find Cathay?" was now the question that Cartier asked himself. Having acquired all the information possible from the natives as to the course of the river, he realized the impossibility of "shooting" the great rapids that lay in his path, and warned by the short days of October that were now at hand and also the signs of a Canadian winter with its dangers and hardships, Cartier deemed it prudent to leave his new-found friends at Hochelaga and prepare to pass the winter at Stradaconna. Bidding them farewell, he heaved anchor and, drifting with wind and current, by the 15th of October his fleet was once more in the Havre de Sainte Croix, where he found that his men had not been idle during his three weeks' absence, for they had built a fort and mounted it with guns. The ruins of that fort were seen by Champlain in 1608. Here the French explorers were to pass the winter, and a hard one, indeed, it proved. In the meantime Cartier encouraged the friendship of the natives by visiting their cabins and propitiating their chief, Donnaconna, who was still smarting over the visit of the white men to Hochelaga. Cartier did not fail to notice the manner of living of these Indians and also that their walls were decorated with the scalps of their enemies. He found, too, that they had provided supplies enough to last through the winter. Nor did he lose sight of their spiritual needs, and finding them inclined to religion he instructed them as best he could. Having explained the nature and importance of baptism, some of the natives desired to be baptized, but as he had no priest with him at that time and as none were in danger of death, he promised to bring priests with him on his return from Europe the next year.

The rigors of a Canadian winter were soon upon them. Deep snows covered rocks and shores, the pine trees and the frozen river, and rose in drifts along the sides of the ships. Mast and spar and cordage were covered with icicles. For a time the Indians paid frequent visits to their white visitors. They were "hardy as so many beasts," and waded, half naked, waist deep through the snow, but gradually these visits grew less frequent, until towards Christmas they ceased altogether. To add to the horrors of the situation of the French, a malignant scurvy broke out among them and carried off one after another, until twenty-five had died and only three or four of the crew remained in health. They comforted one another as best they could and offered up fervent prayers to God for a cessation of their affliction. In the meantime Cartier feared that if the Indians became aware of their deplorable condition they might attack the fort and complete the work of destruction that disease had commenced. None were allowed to enter the fort, and on one occasion when a party of Indians came

near the fort Cartier ordered his men to beat against the walls with sticks and stones so as to create the impression upon the minds of the savages that they were engaged in hard labor. Heaven heard their prayers and sent them relief through the very Indians they so much dreaded. They, too, had suffered from this terrible disease and they had found a cure in a certain concoction made from the bark of the white pine, called "amedda" by the Indians, and Cartier soon realized that "if all the physicians of Montpellier and Louvain had administered all the drugs of Alexandria the effects would not have been so great in a year as the doses of amedda accomplished in six days." With the return of spring Cartier's men improved in health and regained strength, and on May 3, the feast of the Invention of the Holy Cross, they erected a cross and the arms of France with the legend: "Franciscus Primus Dei Gratia Francorum Rex Regnat," thus taking possession of the region in the name of the sovereign of France.

We may be pardoned for making a digression here to call attention to the many evidences of Cartier's lively and active faith as seen in all his voyages. It is manifested in the care he always took to have a chaplain when possible with him on all his explorations; the prayers we have seen him offer up over the sick brought to him by the Indians; the processions and the pilgrimages he ordered in 1536 when his crew was cruelly decimated by disease; the names he gave (according to the custom of all Catholic explorers) to rivers, gulfs and capes he discovered. To him "the capture of forts, the gaining of victories, nor the conquest of countries were nothing compared to the salvation of souls, and the conversion of a single heathen was more than the conquest of a kingdom." He had made the firm resolution "with the aid and assistance of God, the author, protector and distributor of all kingdoms, to have all peoples dwelling in darkness instructed in the Christian religion."⁶ It is to be regretted that the act of Christian devotion recorded above in taking possession of the country in the name of France and of religion should have been marred almost immediately by an act of treachery and ingratitude. But the ideas of the sixteenth century were not those of the twentieth.

Cartier now resolved to return to France, and desiring to give double import to the report he would have to make to his sovereign of his discoveries and of those still to be made, he resolved that Donnaconna should accompany him to the French court. The Indian king and some ten or twelve of his chiefs were lured on board the vessels and kept prisoners there until the French were ready to sail. The outraged and indignant natives vainly offered

* "Lettres Patentes du 6 Novembre, 1603, au Sieurs des Monts."

ransom for their chief, but they were put off with the assurance that he would return to them the next year, on Cartier's return.

After destroying the Little Hermine, Cartier heaved anchor and on May 6 bade farewell to Stradaconna. On July 16 he was again under the walls of St. Malo. He found France at war with Spain, so that four years elapsed before it was possible for him to return to Canada. On his arrival, at the king's command, Cartier prepared a report of his voyage, and this account has come down to us as the "Bref Recis," which did not create the enthusiasm that might have been expected. This was probably due to the disturbed condition of the country. Francis I. realized that he must bestir himself if he expected to establish any claims in the New World. He now (four years after Cartier's second expedition) made considerable sacrifices to found a colony of artisans and farmers in Canada. He appointed a seigneur of Picardy, Jean Francais de la Roque, better known as the Sieur de Robervale, one time governor of Vimieux, as "Lieutenant General of all the countries situated beyond the seas," and, moreover, furnished him the means of fitting out with supplies for two years a fleet of some eight large vessels. Unfortunately the right man is not always at hand, and Champlain was still unborn. Robervale may have been an excellent officer, but he was far from possessing the qualities necessary to the founder of an empire.

On October 17, 1540, Cartier was appointed captain general and pilot of the imposing fleet that was to leave France with no little éclat, and which at once aroused the suspicions of the Spanish king, who was beginning to feel uneasy as to how far west of Pope Alexander's lines of demarkation the Spanish claims might be infringed upon. He watched this expedition, therefore, with no little interest. This new expedition was carried out partly at Robervale's and partly at the king's expense. Robervale's idea seemed to be the mighty organization of the future colony. He selected an imposing staff of gentlemen, of sailors and of educated men and tried to procure a sufficient number of soldiers to protect his people, but so far as recruiting colonists, properly so called, of people who were to form the nucleus of a settlement, he proceeded with the most disastrous results. True, volunteers may not always be found in sufficient numbers, as in this case, and the Viceroy supplied the deficiency with subjects from the prisons of Nantes and elsewhere. Some two hundred and fifty persons of both sexes were thus enrolled, *nolens volens*, and embarked for Canada.

Good, honest Cartier, who had always seen in a new country a vast field for the work of the missionary, must have regarded

this lot of strange pioneers of civilization with many misgivings, but he consented to sail with them.

In the spring of 1541 Cartier was again at the mouth of the St. Lawrence. Robervale was not ready to start with him and did not reach America until June, 1542. In the meantime Cartier built a fort near the present Quebec and named it Charlebourg. A few necessary buildings were erected and a garden laid out in which the colonists expected to raise what vegetables they needed. Harassed by the Indians, who loudly demanded their chief whom Cartier had kidnapped on his former voyage, and who died in France, Cartier resolved not to spend the winter in Canada, nor to wait for Robervale. Here authorities differ. Some claim that Cartier spent the winter in Canada and did not start on his home voyage until spring, others that he sailed in the fall. The fact remains that when near Newfoundland he encountered the three ships comprising Robervale's fleet and his colonists. Notwithstanding Robervale's command to turn back, Cartier saluted him, wished him all manner of good luck and continued his homeward voyage. Whether Cartier made any more expeditions to New France is not known definitely. Some historians claim that he returned to the assistance of Robervale in the following autumn. Lescarbot says that he made a fourth voyage, but this statement is unsupported by other authorities.

Jacques Cartier was now fifty-three years of age, and more than thirty of these years had been spent at sea. He retired from active service after having his accounts settled by the courts, because one can hardly believe that the man who had given France a country almost as large in extent as the whole of Europe had to fight for the compensation for his services. But the great explorer enjoyed a comfortable income of his own. He possessed, through his wife, Catherine des Granges, a house and some lots in the town of St. Malo, rue de Buhen, the same in which Chateaubriand was born in 1769, and Lamennais in 1782. Besides, he inherited some other property from his father, and now, after years of wandering over the seas and exploring the wilds of a new world, we find this hardy mariner enjoying his well-earned retirement and enjoying the society of his ever faithful spouse, Catherine des Granges. Only one cloud seemed to darken his old age. Heaven had not blessed him with children; he never knew the happiness of having grandchildren climbing his knees and listening to the story of his marvelous adventures, but he consoled himself with the affection shown him by the children of his neighbors. He became the godfather of twenty-seven little ones and acted as "witness" at fifty other baptisms. It was at Limoulon that this il-

lustrious discoverer and explorer dictated to his nephew, Jacques Nouel, the interesting account of his voyages. Thus did the last years of this eventful life glide along peacefully and happily, spent between his modest home at Limoulon and St. Malo, "beau port de mer," where he spent many an hour looking out from the ramparts upon the sea, watching the ships coming and going, perhaps, to the very lands he had given to France. He was a hero to the last, at the hour of death, as he had been amid the perils that beset him in life. In 1557 an epidemic broke out at St. Malo, and Cartier, unmindful of the consequences, devoted himself to the care of the sick and dying, and finally fell himself a victim of his devotion. 1903 there was found among the records of the cathedral chapter the permit for his burial: "On September 1, 1557, permission is granted to Michel Audiepure (Audieure or Odieur) to bury Jacques Cartier within (from?) this Church." The deceased was sixty-six years of age. Catherine des Granges survived her husband some eighteen years. She died in 1575. On July 23, 1905, a handsome statue was unveiled with imposing ceremonies at St. Malo. It is the work of the well known sculptor M. George Bateau.

Robervale's attempt at colonization ended disastrously and imposed a loss of 50,000 levies upon the king. But it is hardly fair to Robervale to write him down as a vulgar adventurer. The result of the soundings he made in the gulf and along the river St. Lawrence were of great assistance to those who came after him. Robervale is supposed to have died at sea or to have been assassinated in Paris some time after the death of Cartier. The discovery of Canada will be forever associated with the name of Cartier, the great navigator and zealous Catholic. His "Recis" of his several expeditions may be classed as among the most interesting accounts that have come down to us of the early voyages to New France.⁷

⁷ In the second map of Ortelius, published about the year 1572, New France (Nova Francia) is thus divided: Canada, a district on the St. Lawrence above the river Saguenay; Chilaga (or Hochelaga), the angle between the Ottawa and the St. Lawrence; Saguenal, a district between the river of that name; Moscosa, south of the St. Lawrence and east of the river Richelieu; Avacal, west and south of Moscosa; Norumbega, Maine and New Brunswick; Apalachen, Virginia, Pennsylvania, etc.; Terra Corterealis, Labrador; Florida, Mississippi, Alabama, Florida. Mercator confines the name of New France to districts bordering on the St. Lawrence. Others give it a much broader application. The use of this name, or the nearly allied names of Francisca and La Franciscaine, dates back, to say the least, as far as 1525, and the Dutch geographers are especially free in their use of it, out of spite to the Spaniards. The derivation of the name Canada has been a point of discussion. It is undoubtedly not Spanish, but Indian. In the vocabulary of the language of Hochelaga appended to Le Journal of Cartier's second voyage Canada is set down as the word for village. It bears the same meaning in the Mohawk tongue. Both languages are dialects of the Iroquois. Lescargot affirms that Canada is simply an Indian proper name, of which it is vain to seek the meaning. Belleforest also calls it an Indian word, but translates it to "Terre," as does also Theret ("The Pioneers of France in the New World." P. 202).

The Canadians of the present day revere the memory of Jacques Cartier. In 1889 a monument was erected at the ancient capital of Quebec to this earliest French explorer and to a Jesuit missionary who fell at the hands of New York Indians more than a century after him. The Cartier-Brebeuf monument is twenty-five feet high, eight feet six inches square at the base and is adorned with fine bassi-relievi. At the top, on a cornice of *fleur-de-lis*, is a group representing Cartier's three vessels, Grande Hermine, la Petite Hermine and l'Ermerillon. The inscription tells the story: "Jacques Cartier and his brave companions, the crews of the Grande Hermine, the Petite Hermine and the Ermerillon, wintered here in 1535-1536."

Another inscription is as follows: "On September 25, 1625, Fathers Jean de Brebeuf, Enemond, Massé and Charles Lalemont solemnly took possession of the property called Fort Jacques Cartier, at the confluence of the St. Charles and Loiret rivers, to erect there the first residence of the Jesuit missionaries at Quebec." This identifies Father Brebeuf with the historic winter quarters of Cartier.

Another inscription says: "In May 3, 1536, Jacques Cartier planted on this spot, where he had wintered, a cross thirty-five feet high, bearing a shield with *fleur-de-lis* with the inscription 'Francis I. by the grace of God reigns.'" The fourth tablet has, under the palm branch of the martyrs, the names of the Jesuit martyrs: Jogues, Girnier, Massé, De Noue, Brebeuf, Lalemont, Buteux and Daniel.

Hundreds of years have passed since these noble Jesuit Fathers perished at the stake or fell beneath the tomahawk, victims of the fiendish cruelty of the Iroquois, but the flames that illumined their path to Paradise still shine as a beacon light to searchers of the truth. By the water's edge, in the clearing in the forest, by the mountain's side, the Cross of Redemption planted by the Catholic missionary and explorer towers above all the works of man. Over hill and dale, over town and hamlet, the sweet tune of the Angelus bell is wafted on the breeze and calls the white man and the Indian to prayers, and reminds them of the devoted pioneers of France who braved the dangers of the Canadian forests to carry the glad tidings of man's redemption there.

"Pensif dans son canot, que le vague balance
L'Iroquois sur Quebec lance un regard de feu.
Toujours reveur et sombre, il contemple en silence
L'étandard de la France et la Croix du vrai Dieu."

MARC F. VALLETTE.

THE BOY CHOIR AND GREGORIAN CHANT

IN AN article which appeared in a well-known music journal some months ago a recognized authority on boy voice training made this startling statement: "Gregorian enthusiasts claim that plain chant is not detrimental to purity of treble tone. Many choirmasters of experience maintain that it is, because it works the boy voice too much between middle C and the D an octave above, and too little between the D mentioned and the A above it." He attributes "a certain preponderance of coarseness" in the vocal timbre of boy choirs to the fact that they sing a great deal of plain chant.

With all due regard to the reputation of the authority just quoted, his statement will be challenged by not a few organists and choirmasters. He makes the confession that there is one Catholic choir that makes a specialty of Gregorian chant, and the boys of that choir are celebrated for their beautiful tone quality: "Services that are entirely Gregorian in character are a very severe test of the choirmaster's ability. Indeed, the only Catholic choir we know of that sings a great deal of plain chant in a highly artistic manner, from the voice-trainer's point of view, is that of Westminster Cathedral, London. Dr. Terry's choir boys are celebrated for their beautiful voice quality. Yet they are largely confined to music of the fourteenth, fifteenth and sixteenth centuries and thrive upon a literal diet of plain chant."

Now, if plain chant is detrimental to the tone quality of any choir boys it is detrimental to the tone quality of all choir boys. Why is it that in one choir which has come under his notice, and which makes a specialty of plain chant, "the choir boys are celebrated for their beautiful voice quality." His very admission in this one case proves that the "preponderance of coarseness" which he finds in boy choirs that sing a great deal of plain chant is not due to the fact that they sing plain chant, but rather to the fact that they do not sing it correctly. He should place the blame where it belongs. Choirmasters ignorant of the spirit and genius of Gregorian chant will teach boys to sing the chant in such a way as to coarsen the boys' voices. Boys can sing Gregorian chant on a medium register with a perfectly natural tone production. Correct teaching of Gregorian chant will do no more harm to the boy voice than the teaching of any other style of music. On the other hand, if not correctly taught it will do the same amount of harm as the incorrect teaching of other styles of music.

The dull, heavy style of execution so common in these days with boy choirs who specialize in Gregorian chant is the real cause

of the coarse singing of boys. Joy is the fundamental characteristic of liturgical chant, and therefore it should reflect bright and pleasant effects. The arch-enemy of plain chant, and that which has long robbed it of its good name, is the bad mode of rendering. Shouting, singing anyhow, in a mechanical manner, without the least expression, defects in phrasing, principles which have been extolled as correct in singing Gregorian chant, would not be tolerated for a moment in any other music. Is it any wonder, then, that there is "a certain preponderance of coarseness" in the vocal timbre of some boy choirs? It would be more surprising if such coarseness were not present.

Gregorian chant is prayer, and therefore in its execution it should take on the spirit of prayer. We sing in the Preface: "With the angels and archangels, with the thrones and dominations, and with all the troop of the heavenly army, we sing a hymn to Thy glory." Is our prayer of a dull and a heavy type? On the contrary, prayer is a speaking to a loving Father, with a consciousness that the supplication will not be in vain. Plain chant therefore serves in the first place to glorify God, and should possess those characteristics that awaken devotion and promote edification. By means of the chant the Christian spirit of prayer reveals itself in such convincing manner, that the heart, glowing with the love of God, finds in its sublime melodies the expression of its feelings when the spoken word no longer suffices. Hence there is but one correct mode of rendering Gregorian chant—namely, in the same manner in which we would naturally supplicate God, and when rendered correctly it is detrimental to no voice, no matter how delicate that voice may be.

Because the boy-choristers of Westminster Cathedral, London, render Gregorian chant in a correct manner, "they are celebrated for their beautiful voice quality." The objection that Gregorian chant "works the boy voice too much between middle C and the D an octave above, and too little between the D mentioned and the A above it," has no reality in fact. Dr. Terry's choir boys when singing Gregorian chant alone sing it in a very high register, so that the boys are using their voices on those tones that are most comfortable. It is only in Gregorian selections when they alternate with the men that the boys use their voices between middle C and the D an octave above. Personally, I have never favored alternating boys' and men's voices in Gregorian chant. There is no doubt that singing in unison with men's voices injures boys' voices, for the range of unison music is necessarily limited to the neighborhood of the lower break. The same can be said concerning the practice of alternating men's and boys' voices.

Tastes differ; but, considering the advantages and disadvan-

tages, Gregorian chant is best rendered either by men alone or boys alone. There is nothing more beautiful than two parts of a boy choir, alternating the verses of a solemn "Credo" on the tones of their register, where the beauty and sweetness of their voices are given full sway. Far from injuring their voices, it seems to be most fitting that Gregorian chant should be sung by them. Boys' voices and boys' natures have ever suggested the kind of music that they ought to sing. There is a certain dignity of tone, born of innocence and beauty, which suggests pure thoughts and has been deemed especially suitable for voicing religious worship. Gregorian chant is by its very nature out of place everywhere but in the atmosphere of God's temple. The same must be said of the boy voice. Both are essentially religious, both have their place in church and nowhere else. Grand and solemn and beautiful as the chant is, it seems to take on added purity when produced in the limpid and bell-like tones of the boy voice. One is worthy of the other. When the chant is sung by the boy voice we have the nearest approach to the sweetness and beauty of the heavenly strains sung by angelic spirits.

A great writer has paid this glorious tribute to the beautiful chant of the Church: "Gregorian chant purifies the mind. It transports us into a region of supernatural beauty and immateriality; it vivifies and strengthens the life of the soul. No other music penetrates so deeply and so intimately, or causes to vibrate so harmoniously, the heart of man; no other music carries him so swiftly on its wings to the mysterious worlds of prayer and mysticism. It is exquisitely tender, full of peace and trustfulness; it reawakens faith and hope; it satisfies the heart and the intelligence, for expression and form are here living in peace together. The human element is entirely absent; there is no preoccupation or distraction of things belonging to material life or conditions. Those who go to drink of the waters of this stream come back fortified with a great spiritual ardor, with sincerity of mind and simplicity of heart. Here there is nothing conventional, nothing superfluous, nothing ephemeral; through plain song we pass from the finite to the Infinite."

F. J. KELLY.

Washington, D. C.

THEORY OF JUDGMENT IN MODERN LOGIC

MODERN logic is not a new science discovered or founded in recent times and entirely devoid of all connection with the past. As in the case of not a few other movements of thought, its origin really is a modification of a preceding system. But there is a question as to how far it differs from the traditional or Aristotelian logic. This problem ought to be elucidated somewhat by a historical treatment of one of the fundamental problems of modern logic. I say one of the problems, because in modern logic there are two questions of paramount importance—the theory of judgment and the theory of inference. Here it is proposed to discuss only the theory of judgment and that only in its broader aspect—the general definition of the judgment.

It might be well, however, to point out some of the features which are commonly recognized as giving a distinctive character to modern logic. Conception is regarded by modern logicians as an infinite process. Scientific knowledge goes on and on, ever approaching, never reaching the absolute. This is the orthodox viewpoint of critical idealism. In their attempt to understand the world critical idealists go some distance beyond experience. Absolute idealists, of whom there are some among modern logicians, as, for example, Bradley and Bosanquet, go the whole way to infinity and say what happens there. Pragmatists, such as Dewey, are forever solving problems ever new; they apply concrete solutions to particular problems, and refrain from going on to the thought web. All modern logicians are experimental. Hence, Dewey is a bit presumptuous when he claims that he alone is experimental.

There are a number of distinctions drawn between the traditional system and the modern movement. Aristotelian logic is an empirical, scientific method. Modern logic deals only with theory; it is an attempt to be true and to deal with error and chance. It endeavors to square with modern metaphysics and science. Again, the traditional system places much emphasis on verbal forms, whereas modern logic takes reality into account all the time. The former might be called a species of grammar; the latter, theory of knowledge or even epistemological metaphysics. Whether these differences are real or only verbal, whether doctrinal or only in

point of view may be clearer after discussing the theory of judgment.

HERMANN LOTZE (1817-1881).

The modern movement in logic began when in 1843 Lotze published his first book on Logic.¹ The novelty of his work arises from the new point of view taken rather than from original content. His viewpoint—which became that of modern logic—may be summed up by saying that the theoretical question for man to solve is how to make sense out of the world around us. Man must try to explain the world as presented in sensation. This he can accomplish, as far as he is able, by the intellectual organization of sense data. He takes the fragmentary experiences of sense perception and puts them together; he builds an intellectual structure from the facts given in sense perception. But the thinking mind does not stop here; it advances one step farther and gives the ground for the combination of ideas it has made. Thought “always consists in adding to the reproduction or severance of a connection in ideas the accessory notion of a ground for their coherence or non-coherence.” (Logic,² p. 6.) Hence, the characterizing feature about thought lies in its production of the justificatory notions which condition the form of apprehension.

Since the mind is obliged to gather its knowledge from fragments of the world given in sense presentation and then to infer cautiously what lies beyond experience, it doubtless makes many excursions in paths that do not lead directly to truth. It must be admitted, then, that, despite the objective reference of concepts, there may be much in our knowledge which does not reproduce actual reality. Hence, logic cannot solve the problems it raises; it leads straight into metaphysics. And the metaphysical impulse in us spurs us on to make serious attempts to understand the world. In arriving at truth—the conformity of thought with reality—two mental processes are concerned, judgment and inference. Of these two judgment is the more elementary and fundamental. In the judgment a connection is made with reality; for judgment expresses a relation between the matters of two ideas, not a relation between the ideas themselves. The ideas too are related in some way—this follows from the relation of the objects to which they refer. But

¹ Lotze subsequently (1874) published another work on logic in two volumes. Its doctrine, however, is the same as that in the earlier book. He says in the preface to this second work: “I have followed in essentials the line of thought of my short work on Logic of 1843.”

² References are to the Logic, second edition, in two volumes, English translation by Bernard Bosanquet.

the relation of the ideas as such is of slight importance. It is the matter of fact which is the essential meaning of the act of judgment. In the judgment, "gold is yellow," the idea yellow is not asserted to be a property of the idea gold, but yellow is a property which belongs to (real) gold, is what we wish to express in this judgment.

But logic deals with thought, and so the function of the logical judgment is to explain and express what it is that makes the relation between the idea yellow and the idea gold possible, justifiable or necessary. It accomplishes this task by showing through the copula the relation between the object-matters of the two ideas, a relation due to that which the ideas represent. And it is only between object-matters that a logical copula is conceivable; for between the ideas themselves there can be only a psychic connection or a meaningless relation of inclusion. The judgment is, then, an answer to a question about reality. It is an experiment—an ideal construction applied to reality. If the ideal content of the predicate can be attached to reality, the experiment is successful, the judgment is true within the limits of our knowledge. It is in judgment, then, that connection is made between thought and things, between knowledge and reality. This is possible because thought is a means to knowledge. Like a tool, its two ends are differently adjusted. The one is adjusted to reality, the other to the mind. Thought has an objective reference, but due to the fact that we come in contact with reality only through sense experience, which is a piecemeal method, the road to complete knowledge of reality is interminable.

Lotze is generally labeled an epistemological logician, and it is as such that he is subject to criticism. He does away with some of the valueless verbal forms of the traditional logic, and thereby turns the attention of logicians more to content than to form of thought. But has he bridged the chasm between the world he tries to know and the thought by which he seeks to know it? He does so only by the natural assumption that thought is a means to knowledge. Furthermore, when he speaks of the judgment as expressing objective relations between things, he fails to say that the judgment expresses the relation between the matters of two ideas as that relation is known. It does not deal with objective relations as such but as known, and that despite the objective reference of ideas. Thought, the tool, has one end adjusted to reality, but it is not identical with reality. There seems to me no valid grounds for saying that judgment deals with objective relations as such. On

the contrary, if he could mean that it deals with these relations as known in the mind, there is little departure from the traditional logic, save in the point of view. And there is a difference in attitude or emphasis. Lotze's doctrine is concerned more with the content of thought; the Aristotelian system gives more consideration to the formal side of thinking.

SIGWART.

In 1873 Sigwart published the first edition of his *Logic*, of which the first volume deals with the judgment, the concept and inference. The principles underlying his logical doctrine are the same as those of Lotze. Sigwart mentions this specifically in the preface to the second edition (1888). The new viewpoint, as understood by him, is that logic is grounded "not upon an effete tradition, but upon a new investigation of thought as it actually is in psychological foundations, in its significance for knowledge and its actual operation in scientific methods."³ As Sigwart conceives it, thought is for the most part attempting to arrive at propositions which are *certain* and *universally valid*. But, if left to its natural development, thought frequently fails. Thus it becomes important to discover the conditions under which the essay can be successful, and to determine the rules which will direct to success. And to find such regulative rules is the aim of logic. Yet to be certain and valid thought must make contact with reality. This cannot be done directly, "since the possibility of comparing our knowledge with things as they exist apart from our knowledge is forever closed to us."⁴ What we can do is to find agreement among the thoughts that presuppose existence; for the very assumption that an external world exists is arrived at by means of thought; it is derived by unconscious mental processes from the subjective side of sensation. And this should be sufficient, just as it is satisfactory in the realm of outward action when our behavior and ideas, together with their consequences, are in harmony with themselves and with the ideas of others.

If, then, the world is known to exist only by a reference to thought which is governed by laws, the existent is the same for all thinking subjects, and all who know it must think alike in reference to the same object. Hence, thought which knows the existent must necessarily be universal and valid. In other words, if all we can reach is necessary and universally valid thought, then knowledge of the existent is included in it. Thought of this kind results in judgments. In fact all knowledge consists in judgments. But

³ Preface to the second Ger. edit. 1888.

⁴ Eng. trans. of the second Ger. edit., p. 7.

in order to make true judgments there is needed a system of rules for avoiding error—this is the science of logic. Much as this seems like a guide-book to the royal road to truth, it is not so in fact; for experience teaches us that thought often misses its aim. Hence, all that logic assures us of is the formal correctness of our thought, not the material truth of the results.⁵ It really appears, then, that after all he has said logic for Sigwart is a formal discipline.

All knowledge, all intentional thought is carried out as judgments. And the judgment takes the same form whether the thought it expresses be successful or universally valid or if it fail to attain its purpose.⁶ It is only in the judgment likewise that truth and error have a place. Judgments, then, are all important and may be described broadly as all propositions which claim to be true and to be believed or acknowledged as valid. All statements are judgments, and all fall within the scope of logic, not merely those in which the particular is subsumed under the general. More specifically, however, the act of judging consists in the thought by which the two ideas—subject idea and predicate idea—are consciously unified. And the judgment always states that the idea of the predicate agrees with that of the subject in such a way that the predicate, as a whole, is one with the subject. In addition to this every complete judgment includes also the consciousness of the objective validity of the unification; it claims that the connection is true of objects themselves. This consciousness of objective validity in turn rests on the necessity of the unification, which has its root in the principle of agreement. Still, the objective validity of the judgment is really determined in a specific case by sensory experience. If we judge, "This is snow," the correctness (objective validity) depends upon our vision. If we see rightly, *i. e.*, as normal people see, then our judgment corresponds with fact as far as we can know it.

In Sigwart as in Lotze we see a definite attempt to deal with judgment from its psychological and content sides rather than from the angle of mere formal consistency. There is a definite broadening of the scope of logic. And yet, is this anything more than a new place for emphasis or a new point of view? It is true he would ground every judgment in reality by means of experience, but he admits frankly that it is not the function of logic to say what we must think but only how we must think to reach valid conclusions.

BRADLEY.

About the same point of view is taken in logic by F. H. Bradley.

⁵ Cfr. Eng. trans. of the second Ger. edit. pp. 13-14.

⁶ *Ibid.* p. 17.

In his *Principles of Logic*, published in London in 1883, he sets down his logical doctrines. For the logician the judgment as a psychical fact has no direct importance; it is rather the logical significance that interests him. Viewed from the side of logic, the judgment exists, strictly speaking, only where there is knowledge of truth and falsehood. Again, since truth and falsehood depend upon the relation of our ideas to reality, there can be no judgment without ideas. More than that, we cannot judge until we use ideas *as* ideas—not as mental realities, but as signs of an existence other than themselves. And as such a meaning the idea is universal—the mind has fixed one portion of the content, and that is in no sense an event in time. It is precisely this universal meaning that is used in judgment. And “judgment proper is the act which refers ideal content (recognized as such) to a reality beyond the act.”⁷ Ideal content is meaning. It is recognized as such when we know that by itself it is not a fact, but a wandering adjective. In assertion we unite the adjective to a real substantive. And the relation set up holds beyond and independently of the act of putting together. In the statement, the angles of a triangle are equal to two right angles, the affirmation says this idea of equality is a quality of the real. It is not true, however, that every judgment has two ideas. All have but one; for the whole before our mind is ideal, and so is a single idea.

Bradley maintains about the same position as Lotze and Sigwart. He tries to make connection between the ideal and the real by means of the judgment. The judgment either connects with reality or fails. In fact, his treatment is quite metaphysical, so much so that he is not quite sure whether he should call his work logic or metaphysics. He differs from Lotze and Sigwart in that he is an absolute idealist. Yet he is aware of the limited capacity of human reason and of his own shortcomings. He says in the preface to the *Principles of Logic*, “On all questions, if you push me far enough at present I end in doubt and perplexities.”⁸ But the most interesting question is, how does he attach that wandering adjective to reality? Certainly he does not tack it on objective things as such. No, he says it is attached to a substantive, *i. e.*, to reality. The adjective then is connected with reality, because the idea means something objective. But stated in this way the solution seems to me sufficiently ancient to be venerable.

BOSANQUET

In his two works, “*Logic or the Morphology of Knowledge*”⁹

⁷ The *Principles of Logic*, p. 10.

⁸ The *Principles of Logic*, p. 7.

⁹ First edit., Lond., 1888.

and "Essentials of Logic,"¹⁰ he elaborates a doctrine of the judgment that is somewhat more Hegelian than any we have so far considered. Still, in the preface to the first edition of the *Logic* he says that he has derived much from Lotze and that he owes much in the fundamental theory of judgment to Bradley. For Bosanquet all judgments are intellectual organizations and limitations of primitive sensory qualitateness. There is in knowledge no transition from subjective to objective; there is only a development of the objective. Knowledge, to be sure, is a mental construction of reality. But it consists of what we are obliged to assert in thought; and, since we all have to think it assertorically according to the same methods, the results of our thinking form systems that correspond inter se and with reality. For him reality is nature experienced and organized; not an unknown something.

Now, knowledge is a judgment, an affirmation about reality. And a judgment, he says, is the act of thought which is capable of truth and falsehood.¹¹ In the judgment are used ideas which have a general signification, a fixed reference. And the act of judgment consists in affirming the idea as meaning to be a real quality of that which is perceived in perception. So in the perceptive judgment at least the objective reference of the concept is seen to characterize some reality present in sense perception. Still, judgment has a wider signification than this. It is a standing affirmation about reality; it may be described as "the continuous affirmative judgment of the waking consciousness."¹² In other words, judgment is an intellectual act which extends the sensory experience presented in perception. It is thus co-extensive with waking consciousness, carrying on at all times this process of organizing sense data. But it never quite reaches the complete or perfect reality; for reality (in the full connotation of the term) is what a fully intellectual judgment would be. More specifically, the distinctive character of judgment is that it claims to be true. This means, first of all, that the judgment claims to be in harmony with reality—the system of intellectually organized experience. And it is not true when it is discordant with this system. Furthermore, the claim to truth is made by attaching the meaning of an idea to reality, by showing the identity between our meaning and reality.

In common with other modern logicians, Bosanquet treats the content side of judgment rather than the formal side. He seeks to ground the judgment in reality. And reality for him is the

¹⁰ First edit., Lond., 1895.

¹¹ Cfr. *Logic*, second edit., p. 67.

¹² *The Essentials of Logic*, p. 33.

system of intellectually organized experience as set over against the particular psychic process of judging.¹³ Now, if judgment is a psychic process—and most people will grant that it is—and if reality is a system of intellectually organized experience, what is it that is given in sensation or what acts on the senses? He would seem to answer that it is some point in the real world. For example, in the judgment, "this table is made of oak," he says, "this table is given in perception already qualified by numberless judgments; it is a point in the continuous system or tissue which we take as reality."¹⁴ Granting that it is a point in our intellectual system which we take as reality, it can not as such be the stimulus of the organ of vision; for it is clear that no point in an intellectual system can stimulate the retina. And Bosanquet himself seems to imply that the objects of sensation are some things distinct from what he calls reality; for reality is derived from sense experience by an intellectual act of organizing and extending what is given in perception. But no matter what answer he might give to the question what stimulates the senses, he seems to have put his epistemology in place of metaphysics in such a way as to make the latter impossible.

WUNDT.

In the third edition of his *Logik*,¹⁵ Wundt defines judgment as the analysis of a complete presentation into its essential parts.¹⁶ By this definition he means that the content of the judgment is given in perception and the intellect picks out the mental counters. It is, then, a mechanism for interpreting the given. From this viewpoint it is relatively easy to ground the judgment in reality; for judgment is an analysis of reality as given in perception. We analyze in judgment that which presents itself piecemeal to the senses. We distinguish objects from their qualities, and these we differentiate from changing circumstances as being relatively permanent. So the most original form of judgment is that in which the concept of an object as subject is separated from an occurrence or a passing condition as predicate. But as the function of judgment rises from primitive objective conditions to a higher degree of abstraction, it finally arrives at a plane on which it can not be regarded as the intellectual analysis of perception. It is rather a mental whole which is then analyzed into its essential parts. In this sense a judgment is the analysis of thought into its elementary

¹³ Cfr. *The Essentials of Logic*, p. 67.

¹⁴ *Ibid.*, p. 70.

¹⁵ First edit. published in 1893.

¹⁶ Cfr. *Logik*, dritte Aufgabe, I. Band, p. 147.

concepts. Thus every judgment may be called an analytic function; consciousness and its content are given as one and then separated mentally.

Like others of the modern school of logicians, Wundt is more concerned with the content than with the form of judgment. Like them too he seeks to ground the judgment in reality. He differs from Bosanquet rather markedly in so far as he regards judgment as a mechanism for interpreting what is given in perception, whereas Bosanquet thinks that by means of judgment we actually construct reality. Like Bradley, he distinguishes between the psychic and the logical side of judgment, but he goes farther than Bradley and discusses this psychological aspect in his *Logik*.¹⁷ He is, however, more critical than Bradley; for he confines thought very largely to the interpretation of immediate sense data.

ERDMANN.

For Erdmann the elementary judgment of formulated thinking is a process of "setting" (*Einordnung*) the content of the predicate "in" that of the subject.¹⁸ Hence, in every elementary judgment the content of the subject is the determining part; the content of the predicate is that which is determined by the subject's content. Every single determination which is thought as predicate forms according to this doctrine a part of the content of the subject. The relation between the subject and the predicate is one of incomplete identity—identity of the predicate's content with one part of the subject's content. Erdmann's view of judgment turns the subsumption theory of judgment on its head—a fact which he observes with no little satisfaction. His theory makes not the extent of the predicate but the content of the subject the determining factor in the predictive relation. But the partial identity relation of subject and predicate does not constitute the essence of union by predication. Rather predication is the "setting in" (*einordnung*) of the content of the predicate in that of the subject. And the copula expresses that "set in" relation. The judgment is grounded in reality too, because it is the "setting in" of an object in the content of another. Moreover, he justifies his theory by the consideration that it agrees with his psychological exposition¹⁹ of the same mental process.

However, he makes a very sharp distinction between the psychology and the logic of the judgment. The end-point for psychology is the idea, but this is the starting point for logic. Hence, from

¹⁷ *Logik*, I. Band, Abschnitt I., Die Entwicklung des Denkens.

¹⁸ Cfr. *Logik*, I Band, p. 359.

¹⁹ *Ibidem*, II. Buch, I. Abtheilung, 39 Kap.

his point of view Lotze and Bosanquet approach the problem psychologically whereas a logician should put the logical, the ideal first. This attitude makes Erdmann's system weak unless he is omniscient, for only omniscience contains all possible predicates. For humans the psychological method is the only feasible one. We start of necessity with partial knowledge. Consequently, he cannot know if his theory is true unless he possesses unbounded knowledge. On the other hand, his method of treating the matter first psychologically and then logically is superior to other methods. And his psychology is better than that of most logicians.

CREIGHTON

In his book, "An Introductory Logic," Creighton attempts to put modern logic into text-book form. His doctrine follows Bosanquet rather closely; it is, in fact, very largely a simplification of Bosanquet's teaching. And it may be said to the credit of Creighton that he does make Bosanquet clearer in many places. Creighton regards the judgment as the most elementary process of thought; it underlies the formation of concepts. It is not an external process of joining one part to another, but "an intellectual reaction by which we recognize that something, not previously understood, has a certain meaning or significance."²⁰

Again, all judgments are necessary and universal, *i. e., a priori*. Sensory experience just gives thought the stimulus to start; it offers the occasion for thought. Though he professes to be a critical idealist, Creighton really admits transcendent elements into his system. This contradiction leaves his thought inconsistent, a defect that is quite contrary to idealistic canons. For consistency of thought as based on the principle of contradiction is obviously an essential quality in any idealistic system.

DEWEY.

Dewey's theory of the judgment as set down in his "Essays in Experimental Logic" differs not a little from the theories considered above. For him judgment is an intermediate stage in experience. And one verifies one's judgment by living through the experience. In hypothetical judgments we construct experience—if this is so, that will follow. There are three kinds of judgment: Simple judgment as found in primitive morals; intuitive judgment seen in activities requiring skill; and the reflective judgment. True to his pragmatic viewpoint, he is more interested in the practical value of the judgment, and devotes a long section²¹ to the discussion of

²⁰ An Introductory Logic, p. 326.

²¹ Essays in Experimental Logic, Chapt. XIV.

the judgment of practice. It is turned to the solution of present problems, without thinking of remote consequences.

In criticism of this attitude, it may be fair to insist on the fact that in our ordinary life we are partly idealistic and partly practical. We do not consider what is best in the long run; not always, perhaps, but with sufficient frequency to influence some writers, as Sidgwick, to maintain that one should consider all the results of action in space and time. But Dewey would not cease his endless struggle with small practical problems to think out intellectual systems.

CONCLUSION

After comparing these various theories, it is clear, I think, that the one element common to all is the attempt to get away from logic as a formal science. They make a definite effort to deal with the content side of thought. They strive to ground the judgment in reality as they severally conceive it. The fundamental problem, then, is how to arrive at truth, how to make sense out of the world, and not what are the laws of consistent thought. Again, their treatment of judgment is to some extent psychological. However, some of the writers—as Erdmann and Bradley—draw very sharp line of distinction between the judgment in psychology and that in logic. Conception is regarded as an infinite process by all except Dewey, who confines himself to the solution of practical and particular problems. Still, there is a difference concerning the extension of the intellectual construction beyond experience. Critical idealists go only some distance beyond experience, while Bosanquet, Bradley and Creighton go right on to infinity. All regard reality as a flux or development, but they show little consonance in the precise nature of reality, varying from intellectual creation in Bosanquet to matter of fact things in Wundt.

As contrasted with Aristotelian logic the modern movement is less formal—has less to do with verbal forms. Modern logic is written from the viewpoint of theory, of knowledge and of metaphysics. Allowing for this difference of viewpoint, there is little antagonism, and both are substantially correct from their own standpoints. The traditional logic tends to become so formal as to make nonsense out of psychology, whereas the modern view is inclined to become a universal science of the knowable. This leaning of modern logic is quite evident in Bosanquet. For him reality is but an intellectual construction. Hence, the laws of valid thought become identical with the laws of reality, and logic is the only

science. But even in less extreme forms, if logic must deal with content as well as with form, if it must tell us what to think as well as how to think, it seems to be a substitute for the special sciences and metaphysics. Hence, there is less opposition between the traditional logic and the modern view than between the latter and the special sciences and metaphysics. In fact Bosanquet's logic seems definitely to have usurped the field which metaphysics was wont to occupy.

JOSEPH A. SCHABERT.

St. Paul, Minn.

TWO DISTINGUISHED RUSSIAN CONVERTS.

ALEXANDER I., Emperor and Autocrat of All the Russias and King of Poland, was born in 1777 and succeeded his father, the Emperor Paul, to the throne in 1801. From 1805 to 1855 his name and influence were connected with all the most important political transactions of Europe. As Emperor of Russia he was virtually head of the Greek Church, and as such the question as to what religion he professed at the time of his death is a matter of interest. It is reported that he died a Catholic, and this question has occupied the attention not only of numerous historians, but of many men prominent in European political life. Let us examine the documents that come within our reach and that have a bearing upon the case. We will be strongly impressed by the evidence upon which the Emperor's conversion is based. The Rev. Father J. Gagarin, S. J., has published a highly interesting letter on the subject which we here translate from the "Dictionnaire de Moroni": "Monsieur le Redacteur-in-Chef: You will not be surprised at the importance I attach to having the question as to whether Alexander I. died a Catholic or not definitely settled. We have on this point the testimony of Pope Gregory XVI., preserved by Moroni ("Dxzionarii di storia ecclesiastica") and that of Count de l'Escarene, published by the *Civiltà Cattolica*. The *Germania*, of Berlin, gives us the testimony of Prince Jules de Polignac, affirming that he saw in Paris, at the Ministry of Foreign Affairs, a dispatch from the French embassy to St. Petersburg stating that the Emperor Alexander I. on his deathbed had abjured the schism at the hands of a Catholic priest, and that he afterwards received the last sacraments from the priest.

"To all this testimony I can add still another, signed by a most respected name, but which I do not feel at liberty to disclose. Here it is:

"I certify to have learned from the lips of General Michaud that he (the above-named personage), aide-de-camp to the Emperor Alexander, had from this sovereign the mission to bear to the Pope then reigning (I think it was Leo XII.) the homage of his perfect submission to his spiritual authority. The general saw him kneeling before the Pope and recognizing him, in the name of the Emperor, as head of the Church.

"Moreover, I have learned from a reliable source that the Emperor Alexander in his last illness was attended by a Greek-Uniate monk, and on his deathbed he confided to the Empress regnant, the companion of his journeys through the southern provinces of the empire.

a secret which she was to communicate to the Empress' mother and to the Senate of St. Petersburg. The Empress, overcome by the death of the Emperor, fell sick on her way back and was continually saying: 'I will not arrive in time to fulfill the mission entrusted to me by Alexander.'

" 'In testimony whereof I sign, etc.'

"Finally, a Catholic of St. Petersburg, who was in Italy, wrote me the following letter:

" 'Your last letter has brought to my mind some old but faithful memories. You refer to the audience given by the Holy Father to General Michaud, and of the request made by the latter, in the name of the Emperor Alexander. I can add that there is a tradition preserved in my family which affirms General Michaud's account. Here it is as I have heard it many times in St. Petersburg:

" 'Before starting for the south the Emperor Alexander sent for the prior of the Dominicans of St. Catherine's and commanded him, under the most absolute secrecy, to have a room ready for an ecclesiastic. The prior fulfilled the imperial commands with fidelity, and it was only a long time after the Emperor's death that he revealed the secret to a few intimates.'

"Under present circumstances I feel that I am not revealing the duties of discretion by making known all the proofs, since recent publications have removed all doubts.

"There is nothing left for me now but to hope that new revelations will make known all the details of an event so interesting as the conversion of the Emperor Alexander I. to the Catholic faith.

"Accept, M. le Redacteur-in-Chef, the assurance of my highest consideration.

"J. GAGARIN, S. J."

In 1824 Alexander I. fell seriously ill, and that year, too, occurred the disastrous flood that ravaged the port of Cronstadt and did much damage to the city of St. Petersburg. In the autumn of 1825 the Emperor went to Taganrog, where the Empress had resided for some time; from here he went to the Crimea, and on his return to Taganrog he brought with him the germ of the disease that was to cause his death. On November 27 it became evident that he was in great danger, and on the 30th he expired in the arms of the Empress Elizabeth. His death caused great and sincere sorrow throughout the empire, and nearly all of Europe, over the districts of which Alexander exerted a real and noble influence, joined in regrets. Napoleon once said: "If I die, he will be my heir in Europe."

Fine-looking and well-formed in person, like all the members of the imperial family of Russia, the Emperor was endowed with many admirable qualities; he was courteous and considerate; he spoke and wrote French and English correctly. The history of this great ruler is intimately connected with the entire history of Europe during the early period of the nineteenth century. There are a dozen or more works in various languages in which are recorded the acts and sayings of this sovereign. In some of these works credit is given to the rumor that prevailed that Alexander had been poisoned; in others this assertion is rejected. Others again claim that the malady which caused the Emperor's death was due to the profound pain he experienced on hearing of the conspiracy hatched by the very man he had loaded with favors. Some even went so far as to make special reference to his strong leaning towards Catholicity, and there are those who assert that the Emperor was beyond doubt a Catholic at heart. In the "*Annales des Sciences Religieuses*" there is an article entitled "*Sentiments religieux de l'Empereur Alexandre I.*" From this article we learn that "God had touched his heart to such a point that in all his great troubles and necessities the Emperor appealed to Him with great confidence and that he derived help and comfort, that he had a lively faith, sincere, enlightened, corroborated by his profound religious knowledge drawn from the Holy Scriptures, and in an especial manner from his constant habit of reciting the Ninetieth Psalm with devotion.

The magnanimity of his soul was manifested in an especial manner in an article published in Rome, on page 39 of the "*Roman Constitutional*" of 1849, entitled "*Faits historiques: Lettres autographes de l'Empereur Alexandre I., Sa Mort Catholique.*" This article, after describing his eminent qualities, his public and private virtues, the respect and love he inspired, and for all of which he has already received his reward in heaven, goes on to say: "On one occasion when reference was made to a person devoted to such acts as the Church will one day be called upon to pronounce the sentence of beatification, a venerable religious declared what he had learned from her . . . 'She sees the most remote events as well as the nearest; she foresaw the death of the Emperor as well as the causes of that death.'

"The soul of that sovereign has been saved because he exercised mercy towards his neighbor; because he revered the Sovereign Pontiff, and extended his protection over the Catholic Church in his dominions. The Lord gave him the light and grace necessary for his salvation. Moreover, we know with very certainty that in Rome and elsewhere there are documents that prove the Catholic death of

this pious monarch. 'I have no hesitation,' said Pope Gregory XVI., 'in praying for him with full confidence.'

"I cannot say that I heard these words myself from the lips of the Holy Father, but I can say that he often declared that Alexander I. died a Catholic. In his touching kindness towards me His Holiness deigned to confide to me, under the seal of secrecy, this important fact, with the injunction not to reveal a single word about it during the life-time of Cardinal Orioli. Both Pope and Cardinal having now gone to their reward, for the glory of the Holy See and of the three personages aforesaid, I now deem it useful to reveal this secret. I have copied it carefully from a memorandum made by me immediately after the communication was made to me, so that I might not some day change so much as a syllable of the words of Gregory XVI."

The Emperor Alexander I. of Russia sent General N. to Pope Leo XII. to inform him secretly of his earnest desire to become a Catholic and of his yearning to receive the most complete religious instruction. The personage here referred to General N.'s having been granted an audience by the Pope, and was hardly in his presence when he laid aside his sword, announced himself a Catholic, asked to be permitted to go to confession, and made known his mission to the Pope, adding that the Emperor expressly desired a Camaldulian monk as his religious instructor (perhaps because St. Boniface, the apostle of the Russians, a Camaldulian monk, accompanied by other monks of his order, suffered martyrdom, or perhaps because the famous Cardinal Zurla was made a Cardinal by Pius VII. at the request of the Emperor Alexander I.).

In case a monk of the desired order was not available, then a Minor Conventual would be acceptable. This proposition was joyfully welcomed by Pope Leo XII., who on the night of the very day of the guest's visit sent one of his pontifical carriages to the Camaldulian Monastery of St. Gregory of Monte Celio for Father Maur Capellari, abbot of said monastery and vicar general of the order, a man fully conversant with the ecclesiastical affairs of Russia. On arriving in the presence of Leo XII. the pious and learned abbot was made acquainted with the secret, and he was requested to go to Russia and perform the desired holy mission, assured in advance of the success that awaited him. The father abbot, Capellari, modestly begged to be excused from this charge, and among the reasons he gave for his request was that he did not speak the language of the Russians and the impossibility of learning it at his age. The Pope then asked him if he knew any one compe-

tent to undertake this work or whether a Conventual friar had better be sent for. The good abbot recommended Father Antonio Francesco Orioli, a choice which the Pope heartily approved. Father Orioli having been informed of the work he was to do, and having accepted the task, the Pope put him in communication with General N.

While the general was instructing the good Father Orioli in all it was necessary for him to know, and while they were preparing to set out for Russia, the sad news of the sudden death of the Emperor reached Rome. The death was sudden and perhaps not a natural death, as many believed, and thus vanished the bright hopes that had been entertained in regard to the deceased, but this sad event in nowise threw the least doubt upon the fact of the Emperor's conversion to the Catholic faith.

* * * * *

Another distinguished Russian convert and one well known to the American Catholic of a generation ago is Prince Gallitzin, the second priest ordained in the United States and the first to receive all orders here. Father Stephen Badin, the first priest ordained to the priesthood in this country, received some of the earlier orders in France. Prince Demetrius Augustin Gallitzin, the son of the proudest and most powerful nobleman of the Russian Empire, was born in December, 1770, at The Hague, where his father was the Russian Ambassador. He was a member of the Orthodox Greek Church, to which his father belonged; his mother was a Catholic. For several years the young Prince was brought up in the Greek Church, but at the age of seventeen he was confirmed by a Catholic Bishop. It may be interesting to hear the fact of his conversion told in his own words:

"I lived during fifteen years in a Catholic country, under a Catholic government, where both the spiritual and temporal power were united under the same person. The reigning prince in that country was our Archbishop. During a great part of that time I was not a member of the Catholic Church. An intimacy which existed between our family and a certain celebrated French philosopher (Diderot) had produced a contempt for religion. Raised in prejudice against revelation, I felt every disposition to ridicule those very principles and practices which I have adopted since. I only mention this circumstance to convince you that my observations at that time being those of an enemy, and not of a bigoted member of the Catholic Church, are, in the eyes of a Protestant, the more entitled to credit; and from the same motive I shall also add that during those unfortunate years of my infidelity particular care was taken not to permit any clergyman to come near me. Thanks to the God of infinite

mercy, the clouds of infidelity were dispersed and revelation was adopted in our family. I soon felt the necessity of investigating the different religious systems in order to find the true one. Although I was born a member of the Greek Church, and although all my male relations were either Greeks or Protestants, yet did I resolve to embrace that religion only which, upon impartial inquiry, should appear to me to be the pure religion of Jesus Christ. My choice fell upon the Catholic Church, and at the age of about seventeen I became a member of that Church.

When the time came for him to make a tour of the Continent revolution had converted Europe into a vast battlefield, and the Prince was sent to the United States to make the acquaintance of Washington and Jefferson and to study the institutions of this country. He sailed from Rotterdam for America in August, 1792. After an intimate acquaintance of just two months with Archbishop Carroll, at that time Bishop of Baltimore, young Gallitzin resolved to relinquish a princely fortune, forfeit the highest rank of nobility and devote himself body and soul to the service of God and the salvation of souls in America. He was gladly accepted by Bishop Carroll, and he became the true pioneer of civilization, to carry the word of God and the means of salvation through the untouched forests of Pennsylvania.

In his apostolic trips, which often took him from Maryland to the tablelands of the Allegheny range, Gallitzin came upon a settlement composed of a few Catholic families. He selected this group as a nucleus for a permanent colony which he hoped to make the centre of the missions he hoped to establish. Several poor families whose affection he had won determined to follow him, and with the consent of his Bishop he took up his line of march from Maryland in the summer of 1799. As soon as his little caravan had reached its new home the settlers devoted themselves to the work before them. Their little settlement received the name of Loretto, by which it is still known. Father Henry Lemke, a son of St. Benedict, told me many stories about Father Gallitzin and his experiences with him. In describing this place he says: "Out of the clearings of these untrodden forests rose up two buildings constructed out of the trunks of rough-hewn trees; of these one was intended for a church, the other a home for their pastor. On Christmas Eve of the year 1799 there was not a winking eye in that little colony. The new church, decked with pine and laurel and blazing with such lights as the scant means of the faithful could afford, was awaiting its dedication to the worship of God. Father Gallitzin now offered up the first Mass, to the great edification of his flock and to the astonishment of the few Indians

who had never dreamed of such pageantry. There the energetic missionary labored amid privation, hardship and disappointments for nearly half a century. In spite of his many and varied occupations, he found time to write and give to the world his "Defense of Catholic Principles" and his "Letters on the Holy Scriptures." They exerted a very great influence even among the upper classes of society, but they were especially dear to the humble members of the community, for whom they were written. One of his biographers says: "The curiosity of readers increased their circulation everywhere, and I myself have found Gallitzin's works as perfectly thumbed as any spelling-book in spots where I never dreamed of meeting with them."

Years passed and the prince-pioneer could mark the slanting shadows of declining life when a young missionary came over from Europe to help him in his arduous labors. This was Father Henry Lemke, a Benedictine, and also a convert, as he told me himself. After acting as Father Gallitzin's assistant for some time, he became his successor, and, after years of trial in the Alleghenies, died, full of years and good works, in the seventies, at the Benedictine monastery at Elizabeth, N. J. Father Lemke set out from Philadelphia, and after a journey of several days over rough and almost impassable roads reached Munster, where he came across an Irish family who received him kindly. In that village he procured a guide and started for Loretto. "After we had gone a couple of miles through the woods," to use Father Lemke's own words, "I caught sight of a sledge drawn by a pair of vigorous horses and in it I saw a half-recumbent traveler, on every lineament of whose face could be read a character of distinction. It occurred to me that some accident had befallen the old gentleman. He was dressed in a threadbare coat and a dilapidated hat, and it seemed to me that some injury compelled him to resort to this singular mode of conveyance. While I was racking my brain for a satisfactory solution of the problem my guide turned to me and, pointing to the old man, said: 'There is the priest.' I immediately coaxed my nag up to the sledge and asked, 'Are you the pastor of this place?' 'I am, sir, Prince Gallitzin, at your service,' he replied with a smile. 'You are probably astonished,' he continued, 'at the strangeness of my equipage; but there is no help for it. You have already found out that in these wild regions you need not dream of a carriage road. You could not drive ten yards without danger of upsetting. I am prevented by a fall which I have had while riding on horseback, and it would be impossible for me to travel on foot. Besides, I can carry along everything required for the celebration of Mass. I am now going to a place where I have

a mission and where the Holy Sacrifice is announced for to-day.'” This was the first meeting between the old pioneer-priest and the young Benedictine who was to be his assistant during his declining years and who was to be his worthy successor.

In 1839 the venerable missionary’s heart failed him. The weight of years and of untold hardships bore heavily upon him. His once erect form became gradually bent; his step became unsteady; his voice failed him, and the last scene of his eventful life closed in his seventy-first year, May 6, 1841, when the missionary-prince left this world followed by the prayers of his parishioners gathered around him. Every room in his house and the chapel attached to it was thronged with a wailing, weeping and praying community. The supreme hour revealed the depth and sincerity of the love which dwelt in every heart for this man of God. On the day of the funeral people came from every quarter within fifty miles to pay to their devoted friend and father a last tribute of the affectionate respect which had attended him through life. His grave is now surmounted by a handsome monument—a credit to the good people he served so faithfully in life by their descendants, who have been taught to hold his name in veneration. This prince-priest was the founder of Loretto, and the town of Gallitzin, Pennsylvania, has been named in his honor. His kinswoman, the Princess Elizabeth Gallitzin, became a member of the Order of the Sacred Heart. She came to this country in 1840, founded four houses of her community, and died of yellow fever in Louisiana in 1843. Perhaps the character of this man of God may be illustrated by the provisions of his will, which is here appended. Among the provisions in this will is one for Masses; be it noted that these Masses were not for himself, but “for the souls of the faithful departed”—those who had no one to pray for them. One part of his belongings is devoted to “the relief of widows and orphans,” and another part to several persons, named in the will, as “raised by me.” The will is as follows:

“In the name of God, Amen. I, Demetrius Augustus Gallitzin, parish priest of St. Michael’s Church, near Loretto, in the county of Cambria and Commonwealth of Pennsylvania, do make and publish this, my last will and testament, hereby revoking and making void all former wills by me at any time heretofore made. And as to such worldly estate as it has pleased God to entrust me with, I give and bequeath as follows:

“First, I direct that all my debts and funeral expenses shall be paid as soon after my decease as possible, and for the purpose of enabling my executors to do so, I hereby authorize them to sell and convey by sufficient deed or deeds to the purchaser or purchasers

thereof any part of my real estate, except such part as is hereafter disposed of. I give and bequeath to the Right Reverend Bishop Francis Patrick Kenrick, Bishop of Arath and Coadjutor of the Bishop of Philadelphia and his successors, or to the Bishop that may be appointed for the western diocese of Pennsylvania and his successors, when such appointment shall be made, in trust forever, for the support and use of the Roman Catholick clergy duly appointed by the said Bishop or Bishops or their successors, according to the rites of the Holy Roman Catholick Church to officiate at St. Michael's Church above mentioned, all the farm whereon said church is erected, together with the lands and appurtenances thereunto belonging. I give and bequeath to the Bishop or Bishops above mentioned, in trust forever, for the purpose of erecting a church thereon, all the square of six lots in the town of Loretto, known and numbered in the plan of said town as Nos. 25, 26, 27, 28, 29 and 30.

"I give and bequeath to Mary Wharton the sum of five hundred dollars to be paid by my executors to her. I give and bequeath to Catharine Wharton the sum of two hundred and seventy-five dollars.

"And whereas, there is money due me from Europe, the receipt of which is doubtful, I therefore direct my executors to exercise a sound discretion in distributing, according to circumstances, the residue of my estate as follows: One part or portion towards the relief of poor widows and orphans; one for Masses for the souls of the faithful departed; one other part for to aid in the erection of a Catholic church in the town of Loretto, upon the lots above described, and one other part to Susannah Christy, Sarah Durbin, Elizabeth Durbin, Ann Storm, Francis McConnell and Hugh McConnell, all of whom were raised by me. And I do hereby appoint Michael Leary, William Todd and Henry J. McGuire executors of this my last will and testament.

"In witness whereof I have hereunto set my hand and seal this 25th of April, A. D. 1840.

"DEMETRIUS AUG. GALLITZIN.

"Sealed, declared and delivered in the presence of us, who in the presence of the testator and of each other subscribe their names as witnesses:

"Patrick Shields,

"Peter Christy,

"Augustine Holt."

This will was made eleven days before his death, and a copy of it written by his own hand is still extant among some other of his papers.

His life shows how divine grace had moulded him into one of

earth's most perfect men. He gave up the worldly wealth and prominence to which his noble birth entitled him, to devote his life to God's poor far from his native land. In the then wilds of Pennsylvania he "sought out God's poor" and dwelt among them, labored among them, suffered all manner of privations and hardships for their sakes and finally died among them. Beneath the old trees at the very door of Loretto church, which he dedicated to St. Michael, he sleeps in simple pomp his last, long sleep of death. May he rest in peace.

The two distinguished converts with whom this paper deals so briefly have in their lives many characteristics in common. They were both natives of the same country; both belonged to the most illustrious of Russia's proudest nobles; both were inspired by the deepest religious feelings and aspirations, and both sought and found light and rest in the bosom of the Holy Catholic Church. They were both anxious to save souls—the one to save his own, the other to save the souls of his fellow-men; one as head of a schismatic church could not follow the dictates of his conscience openly without grave consequences to himself and to the State; the other had the happiness of not only being able to follow the dictates of his own conscience, but of leading others into the Church of his choice. They were both model Christians leading saintly lives and they left an example to posterity worthy of imitation. It would seem as if heaven had thought it meet to reward these two heroic souls that exemplified the principle of St. Ignatius Loyola that the Christian should have the faith which hopes everything from God and then acts as though he expected nothing save from his own exertions. They toiled and trusted and then with beating hearts awaited the opening of the Golden Gate.

* * * * * * *

In addition to the two distinguished Russian converts above mentioned, we might add still another, the Rev. Augustine (Count) Schouvaloff. He was born in St. Petersburg in 1804, and after no end of trials and afflictions found rest and peace in the Catholic Church. After the death of his wife he abandoned the Greek faith and was received into the Catholic Church in Paris by the well-known and saintly Jesuit, Father de Ravignan, on January 5, 1843, in the presence of two other Russian converts, Madame Schwetchine and Prince Theodore Gallitzin. A few years later he retired from the world, and being admitted into the Order of Barnabites, some members of which he had learned to love and respect some years before in Milan, he made his vows of religion on May 2, 1857, and on September 18 of the same year was ordained priest. He was

immediately sent to Paris by his superiors, and during the rest of his life, which unfortunately was not destined to be long, he was a perfect model of humility, charity and zeal for the conversion of sinners. He was an eloquent and convincing preacher and perfectly familiar with French, German, Italian and English, and was thus able to hear many confessions in these languages, besides giving missions and retreats in French at Paris, Orleans, Amiens and other cities of France. He never ceased to love and pray for Russia, and after his conversion he used to offer his life every day to Almighty God, if He would accept it, as some sacrifice for the reunion of Russia to the Holy See. It was for his fellow-countrymen particularly that he wrote an account of his conversion and vocation, which has been translated into several languages. The English translation is entitled "My Conversion and Vocation. By the Rev. Father Schouvaloff, Barnabite."

Of Madame Schwetchine we may say that she belonged to a family distinguished for all that is intellectual and cultured. Her life, so far as her exalted social position permitted, was devoted to deep study. She was profoundly interested in philosophical and controversial subjects; she denounced the works of German rationalists and her logical mind was able to estimate them at their proper worth. An early acquaintance with De Maistre brought the doctrines of the Catholic Church to her attention and she was not long in accepting them, and she became a devoted Catholic and a staunch defender of her new faith. She went to Paris in 1816 and at once became the centre of a most celebrated circle. Her travels in Italy are charmingly described in her "Life and Letters." Her intimate relations with such men as the pious Abbé Desgardins, with the eloquent and persuasive Lacoédairé and with the unfortunate De Lamennais lend a historic interest to her memory. She was a happy solution of the woman question, inasmuch as she was independent, intellectual, strong-minded, but without losing her womanhood and becoming mannish. "A knowledge of her life," says William Rousserveille Alger, a non-Catholic, "would dispel the narrow prejudices which exist in many circles against the Roman Catholic Church."

H. B. N.

New Orleans, La.

RIGHT REVEREND AND HONORABLE ALEXANDER
MACDONELL, FIRST BISHOP OF ONTARIO.

IT IS just ninety-two years since Pope Leo XII. erected Upper Canada, now known as the Province of Ontario, into a diocese and appointed Right Reverend Alexander Macdonell, D. D., its first Bishop, Kingston being chosen as the episcopal see. The diocese comprised the whole of the present Province of Ontario, which has since been subdivided into the ten dioceses of Kingston, Toronto, Ottawa, Hamilton, London, Peterboro, North Bay, Pembroke, Alexandria and Haileybury. From 1820 to 1826 Upper Canada was under the care of a Vicar Apostolic, Bishop Macdonell having been consecrated Bishop of Rhosina and Vicar Apostolic of Upper Canada in the Ursuline convent of Quebec on December 31, 1820. Three years previous to this two other vicariates had been established—one in Nova Scotia and the other in New Brunswick, Prince Edward Island and the Magdalen Islands. In 1819 Quebec, the mother diocese of Catholicity in North America, was erected into a metropolitan see, with Most Rev. Dr. Joseph Octave Plessis, eleventh Bishop of Quebec, as its Archbishop, having as suffragan Bishops the Vicars Apostolic of Upper Canada, Nova Scotia, Prince Edward Island, New Brunswick and the Magdalen Islands. It should, however, be stated here that owing to the attitude of Great Britain at this time towards the Catholic Church the title of Archbishop was not assumed till more than twenty years later by the Bishop of Quebec. On the erection of Upper Canada into a diocese in 1826 there were but seven priests in the whole province, namely, Father William Fraser at Kingston, Father Angus Macdonell at St. Raphael, Father John Macdonald at Perth, Father James Crowley at York (now Toronto), Father Patrick Haran at Richmond, near Ottawa, and Fathers Joseph Crevier and Louis Joseph Fluet, in charge of the missions at Sandwich and Malden.

More than a century and a half had elapsed since Recollet and Jesuit Fathers had labored among the Huron, Neutral and Cayuga Indians on the shores of the Georgian Bay, in the peninsula of Niagara, and along the Bay of Quinte. The names of Fathers Chaumont, Brébeuf, Lallemant and Fenelon, the latter a brother of the illustrious Archbishop of Cambrai, lived only in the annals of the missions and the span of years which intervened between these twilight days of the Cross and the advent of the pioneer Bishop of Ontario. Right Rev. Alexander Macdonell created new duties and a new field of labor for the missionaries—the needs of religious

ministration among the early Catholic settlers being paramount to every consideration of missionary work among the Indians. Right Rev. Alexander Macdonell, the first Bishop of Canada, who laid the foundations of the Catholic Church in this Province deeply and securely, was in every sense of the word a remarkable man. He was born in Inchlaggan, in Glengarry, Inverness-shire, Scotland, on July 17, 1760, and being from infancy destined for the Church, was at an early age sent to Douai, thence to the Scottish College at Paris, and subsequently to the Scottish College at Valladolid, Spain, where he was ordained priest on February 16, 1787. On leaving Valladolid he returned to Scotland and served for four or five years as a missionary priest at Badenoch and the Braes of Lochaber so celebrated in the old Jacobite song, "Lochaber No More." By the way, it is worth noting that it was this Continental training which Bishop Macdonell received at such renowned seats of learning as the colleges of Douai, Paris and Valladolid that gave him that fine and solid scholarship which as a missionary Bishop marked with distinction all his sermons, addresses, pastorals and letters. It can be said with truth that Bishop Macdonell both wrote and spoke elegant French, was no mean Spanish scholar and had a command of strong, clear and vigorous English, reminding one very much in his style and turn of thought of his scholarly and militant though not immediate successor in the See of Kingston, Monsignor Cleary.

When Bishop Macdonell, then Father Macdonell, arrived in Canada in 1804 he found but two wooden Catholic churches in the whole Province of Ontario, then known as Upper Canada. As early as 1772 emigration from the Highlands of Scotland had taken place to North America, the first points of settlement being New York, the Carolinas and Prince Edward Island. It was in 1792 that Father Macdonell, then a missionary priest in the Braes of Badenoch, Inverness-shire, seeing his people dispossessed of their little agricultural holdings by a law passed which converted small farms into large sheep walks, went down to Glasgow and found a place for his Catholic laborers in the manufactories of that city, accompanying them at the same time in order to minister to their spiritual needs. Conditions in the manufactories of Glasgow brought about by troubles in France, Holland and other parts of the Continent soon obliged the cotton manufacturers of Glasgow to dismiss the greater part of their hands, and so the Catholics thrown out of employment were obliged to enlist through necessity in the several new corps then being raised for the defense of the country. It was then that Father Macdonell went to London and called upon the Secretary of War, the Right Hon. Henry Dundas, and offered to raise a Catholic

regiment. This offer was accepted by the English Government, and so Father Alexander Macdonell soon found himself, as chaplain, at the head of the first Catholic corps raised in the British dominions since the Reformation. This Catholic corps, known as the Glengarry Regiment, with Father Macdonell as its chaplain, did honorable service for the Crown in those stirring times, when the peace of Europe was shattered and the chaos of the French Revolution threatened the stability of monarchical government in England. Because of services rendered, when the Scotch fencible regiments were disbanded following the treaty of Amiens in 1802, Father Macdonell was able to obtain from the Crown a grant of land for the disbanded Catholic fencible regiment in Upper Canada.

Here is the letter of Lord Hobart, Secretary of State for the Colonies, to Lieutenant General Hunter, then Lieutenant Governor of Upper Canada, apprising him of the agreement and gift:

“Downing Street, March 1st, 1803.

“Sir: A body of Highlanders, mostly Macdonells and partly disbanded soldiers of the late Glengarry Fencible Regiment, with their families and immediate connections, are upon the point of quitting their present place of abode with the design of following into Upper Canada some of their relatives who have already established themselves in the Province. The merit and service of the regiment in which a proportion of these people have served give them strong claims to any mark of favor and consideration which can consistently be extended to them; and with the encouragement usually afforded in the Province, they would no doubt prove as valuable settlers as their connections now residing in the district of Glengarry, of whose industry and general good conduct very favorable representations have been received here.

“Government has been apprised of the situation and disposition of the families before described by Mr. Macdonell, one of the ministers of their Church and formerly chaplain to the Glengarry Regiment, who possesses considerable influence with the whole body. He has undertaken, in the event of their absolute determination to carry into execution their plan of departure, to embark with them and direct their course to Canada. In case of their arrival within your government, I am commanded by His Majesty to authorize you to grant in the usual manner a tract of the unappropriated Crown lands in any part of the Province where they may wish to fix in the proportion of twelve hundred acres to Mr. Macdonell and two hundred acres to every family he may introduce into the Colony.

“I have the honor to be, sir, your obedient humble servant,

“Lieutenant General Hunter, etc.”

(Signed) “HOBART.”

With respect to Highland Scotch emigration to America, it may be worth noting here that the first took place, as we have already noted, in 1772. The Scotch who arrived then all settled in South Carolina. They were Protestants. Flora McDonald, who had given shelter and aid to "Bonnie Prince Charlie," was among the number. The following year a shipload of Highland immigrants came to Prince Edward Island, then called the Island of St. John's. These were all Catholics and came chiefly from South Uist, Scotland, where for years they had maintained their faith in the face of the severest persecution. Many of those later on moved from Prince Edward Island to Nova Scotia. This Highland contingent on leaving Scotland was in charge of John Macdonald, of Glenaladale, who had purchased a tract of 40,000 acres in Prince Edward Island, upon which he settled his persecuted fellow Catholics from South Uist. Sir William Johnson, having been created a baronet for services rendered to the British Crown, was also given a gift of one thousand acres in the Mohawk Valley, New York. Sir William desired tenants, and, turning his eyes to the Highlands of Scotland, easily prevailed upon the persecuted Highland Catholics to emigrate and settle upon his estate. So in August, 1773, we learn that four hundred Highlanders embarked for America to settle in the Mohawk Valley, New York. Sir William died in 1774, and the title descended to his son, Sir John Johnson. It does not appear, however, that either Sir William Johnson or his son made any effort to secure the ministration of the Catholic religion for their Catholic tenants. This only came with their settlement in their new home in Canada.

As soon as the Revolutionary War of 1776 flamed out, the people of each colony had necessarily to declare themselves either as pro-Continentalists or pro-United Empire Loyalists. The Scotch of South Carolina very largely supported the Continentalists, while those in the Mohawk Valley, in the County of Tryon, stood loyally by the Crown. In truth, the Scotch Catholics who had settled in the Mohawk Valley, joining their forces with those who had come to Canada through their fathers, had fought against the house of Hanover at Culloden, and many of them were descendants of those who had escaped from the bloody massacre of Glencoe, now fought in support of their king against the American revolutionary party. General Howe, who was commander-in-chief of the forces in British North America, authorized Sir John Johnson to raise a regiment in the Mohawk Valley. But the Continental party was watching closely, and resolved that Sir John should declare himself in no equivocal manner as either friend or foe of those who were struggling to cast off the yoke of Britain. At this critical juncture, in

order to prevent his loyal followers from falling into the hands of the Continentals as prisoners, Sir John determined to set out for Canada through the woods. We learn from the "Documentary and Colonial History of New York," Vol. VIII., page 683, that the party consisted of three Indians who served as guides, one hundred and thirty Highlanders and one hundred and twenty others. Nineteen days were consumed in this trek from the valley of the Mohawk to Montreal, during which they suffered every manner of hardship, and arrived in the Canadian city in a most pitiable condition early in May, 1776. Mrs. Johnson, wife of Sir John Johnson, was kept as a hostage at Albany as a surety for the good behavior of her husband. Next year the residue of the Catholic Scotch settlers in the Mohawk Valley, together with a number of German loyalists, made their way also to Canada.

One has but to glance at the names of the officers of His Majesty's Regiment of Royal Highland emigrants and those of the first and second battalions of the King's royal regiments of New York to realize how much those Highland Scotch Catholics did to keep Canada loyal to the Empire. In truth, one of the first things that Bishop Macdonell, then Father Macdonell, did soon after his arrival in Canada in 1804 was to urge upon the British Government, through Colonel John Macdonell, the Lieutenant of the county of Glengarry, the wisdom of raising in Glengarry a fencible regiment. This suggestion, though set aside for the moment, was later on acted upon by the Canadian Government, and the Glengarry Light Infantry Regiment was raised. This regiment, which had for chaplain Father Alexander Macdonell, who later became the first Bishop of Ontario, served in the War of 1812-14 and took part in fourteen engagements. It was present at the taking of Ogdensburg, Fort Covington and Oswego, at the attack on Sacketts Harbor and at the battle of York. They lost three companies at the landing of the Americans at Fort George and were also at the battles of Stoney Creek and Lundy's Lane.

In connection with the taking of Ogdensburg a writer relates the following story of the chaplain of the Glengarry Fencibles:

"When Ogdensburg was taken by the Glengarry Fencibles and the Glengarry Militia, under Colonel George Macdonell, on the 23d of February, 1813, the chaplain being with his clansmen, a Mr. Ross, one of the Glengarry Fencibles, being wounded, was carried into the house of an innkeeper near Prescott who had American sympathies like some along the borders. The chaplain saw that the wounded man was as much in need of stimulants as of priestly counsel, and went at once in search of some brandy. Excuses of various kinds were made by the woman of the house. Her husband

was absent and had the keys and so on. The chaplain told her he would take no denial and that if she did not procure the brandy forthwith he would have it in short order. She still demurred, whereupon he walked to the taproom door and with one kick lifted it off its hinges, and not only Mr. Ross but all others of His Majesty's liege subjects had all the brandy they required after their hard day's fighting."¹

It was a tradition in the Macdonell family in Scotland that every son should be either a soldier or a priest. The Macdonells had been from time immemorial a great fighting clan. They were of the house of Glengarry, a branch of the clan Donald, now generally recognized as inheriting the chieftainship of the whole clan. For services rendered to the royal house of Stuart they were rewarded by Charles II. with a peerage under the title of Lord Macdonell and Arross. Bishop Macdonell was every inch a soldier in stature and bearing, and had he not been a great missionary in the Church of God he would have become, like his kinsman, Colonel Alexander Macdonell, known as Allastair *Ruagh* (the red), the young chief of Glengarry, a great military leader.

Referring to the soldier element in the character of Bishop Macdonell, his biographer says: "Bishop Macdonell had all the qualities of a soldier. His stature was immense and his frame herculean. He stood 6 feet 4 inches and was stout in proportion; he had undaunted courage, calm, cool judgment, resolute will and a temper almost imperturbable; he had the endurance of his race; fatigue and privation were as nothing to him; he was a man of great natural ability, great parts and a great personality which impressed all brought in contact with him; he inspired confidence, admiration and respect, but above all he was a born leader of men. The gain to the Church was great, the loss to the army correspondingly great when he was ordained at Valladolid."²

The chief settlements of the Highland Scotch Catholics were made in Glengarry in 1786 and 1803. In 1786 two ships sailed from Scotland filled with emigrants. The first reached the American coast too late to make Quebec harbor and landed its passengers at Philadelphia. Next year they went through to Lake Champlain in boats and were met at Ile-aux-Noix by their friends who had already established themselves in Ontario. The second band were from Knoydart and were under the leadership of Rev. Alexander MacDonald, of the family of Scothouse, a cousin of the chief of Glengarry. As the ship sailed out of the harbor of Greenock, Father Macdonald addressed his flock and placed them under the protection of St.

¹ "Sketch of the Life of Bishop Macdonell," by J. A. Macdonell.

² "Sketch of the Life of Bishop Macdonell," by J. A. Macdonell.

Raphael, the guide of the wanderer. A few moments later there was a wail of terror; the ship was aground. "*Sios air er gluneau agus dianibh urnaigh!*" ("Down on your knees and pray!") thundered the priest. St. Raphael interceded, the ship slid off, and in the *Quebec Gazette* of 1786 appeared a chronicling of the arrival in that port of the good ship Macdonald, laden with its precious burden of Highland Scotch immigrants. They settled some miles north of Lancaster in what is now known as St. Raphael's parish and fell to work to build their houses and construct a pioneer church called "Blue Chapel"; of course, the church and parish were dedicated to the Archangel Guardian. In 1803 came another party of emigrants from Glengarry in Scotland who settled near the earlier comers. Along with these came Rev. Alexander Macdonell (Allastair), who became later the first Bishop of Upper Canada.

It should be mentioned here, however, that the first band of Highland Catholics to arrive in Upper Canada was in 1776. An Irish priest, Father McKenna, had charge of them. They were about three hundred in number, and their arrival is noted by Rev. Father Montgolfier, the seventh superior of the Seminary of St. Sulpice and Vicar General of Montreal, who furnished Father McKenna with "the ordinary powers for ministering to his ambulating parish." We mention these facts as entirely relevant to the subject of this paper, seeing that the episcopal work of the great missionary Bishop Macdonell was closely bound up with the early Catholic life and history of Glengarry County in Ontario. As soon as Father Macdonell arrived in Canada in 1803 his first thought was to secure the land stipulated for his friends. He discovered, however, on his arrival that few of the emigrants who had preceded him and had located themselves on lands allotted them had obtained legal tenures for their possessions. All this Father Macdonell had to adjust with the Government, so that after considerable trouble and delay Father Macdonell not only obtained patent deeds for 160,000 acres of land for his new clients, but obtained patents for the lands of his own immediate followers. Soon after Father Macdonell's arrival he was appointed to the mission of St. Raphael in Upper Canada and in 1807 became a Vicar General. Here he devoted himself with ardor and zeal to the duties of his sacred office. "For more than thirty years," says his biographer, "his life was devoted to the missions of Upper Canada. He traveled from the Province line at Coteau-du-Lac to Lake Superior through a country without roads or bridges, often carrying his vestments on his back, sometimes on horseback, sometimes on foot or in rough wagons then used, and sometimes in Indian bark canoes, traversing the great inland lakes and navigating the rivers

Ottawa and St. Lawrence to preach the Word of God and administer the rites of the Church to the widely scattered Catholics, many of whom were Irish immigrants who had braved the difficulties of settling in our Canadian woods and swamps.”³

It is not known whether Bishop Macdonell visited on this episcopal tour the old Indian missions on Manitoulin Island and along the shores of Lake Superior. We have evidence, however, that on a later episcopal tour Bishop Macdonell visited Fort William; but it was not till 1835 that a priest attended these missions regularly, the first to do so being Father Proulx, who had his residence at Penetanguishene. In 1837, as his own request, Father Proulx took up his residence at the Manitoulin Island and remained among the Indians till 1845, when all the Northern missions on the lakes were given over to the Jesuits. In connection with the missions of Lake Superior we find a letter addressed to Bishop Plessis, of Quebec, from Bishop Macdonell, then Vicar Apostolic of Upper Canada, and dated March 28, 1821, for the purpose of receiving the approbation and consent of a Mr. McGillivray, of Quebec, to a Rev. Father Provencher being received at Fort William. This great missionary became afterwards the first Catholic Bishop of St. Boniface, Manitoba. At this time the Catholic census of Perth, Richmond and Lanark gave 1198 souls and the Catholic population of St. Raphael's and St. Andrews, including Caledonia and Finch, was 5,000. In the following year Father William Fraser, who had been doing mission work on the Bay of Quinte, was sent to Perth and Richmond. Throughout his whole life Bishop Macdonell of necessity as a Catholic Bishop stood for law and order and respect for authority. He counseled, under every circumstance, loyalty to the Crown and for a redress of grievances resort to constitutional methods. He saw as a chaplain at the head of the Glengarry regiment sent to Ireland in the uprising of 1798 how disastrous are these uprisings to the people who foment them when a mad soldiery is let loose among them. Because of this he advised the Catholics of Upper Canada to give no aid to William Lyon Mackenzie and his followers in the rebellion of 1837.

Touching Bishop Macdonell's love of law, order and respect for authority, a writer tells us: “Bishop Macdonell had a marked dislike for lawlessness. When in the Scots College, Paris, he and other inmates were disturbed by the revolutionary rabble. He there observed the first effects of the French Revolution which a few years later brought wreck and ruin in its train. Hence we find him a staunch supporter of law and order in his long and useful career. From his first years as a young priest in Badenoch; when at the age of twenty-

³ *Reminiscences of Bishop Macdonell*, by Chevalier Macdonell.

seven he put his foot on the threshold of his lifelong labor to the age of eighty years, his aim was to uplift the moral and social condition of his fellow-men."⁴ We cannot fully understand or realize the herculean work performed by this great pioneer and missionary Bishop if we do not appreciate the obstacles with which Bishop Macdonell had to contend and the times in which his life had setting. As the great Daniel O'Connell had first to create an Irish people—lift them as serfs from their knees—so this heroic Bishop of God's Church had first to allay all prejudice and give strength and courage to the Catholic believers whom he found scattered in the wildernesses and grouped in settlements along the shores of Canadian lakes and amid primeval and impenetrable forests. Let us remember, too, that those were the days of pre-Catholic emancipation—days when a Catholic could not hold any high office under the British Government unless he took an oath abjuring his religion. Even Catholics entering the army were subjected to an oath odious to their convictions. Nor was this condition of things peculiar alone to Great Britain and Ireland. It had extended to the colonies. The position of the Catholic Church at the close of the eighteenth century and the beginning of the nineteenth century was to say the least a peculiar one in Quebec. The ruling powers endeavored to enforce the Royal supremacy. They refused to the Bishop of Quebec his proper title. As parish priests died out it was intended to replace them by Protestant ministers—in short, to make the Church a mere State machine. So sure were these gentlemen of success that a project for letters patent drawn up during the administration of Governor Craig contained the following words:

"By these presents we constitute and nominate our ecclesiastical superintendent for the affairs of our Church of Rome in our Province of Lower Canada, and we authorize the said . . . and his successors to exercise spiritual and ecclesiastical jurisdiction in our said Province according to law, and we have given and accorded to our said ecclesiastical superintendent full power and entire authority to confer the order of deacon and priest to institute by himself or his delegate the priests and deacons that we shall present and nominate to benefices in the Province with charge of souls."

In 1825 Bishop Macdonell, who had been created Vicar Apostolic of Upper Canada in 1819, paid a visit to Europe for the purpose of obtaining aid for his vast diocese and to induce the English Government to withdraw its opposition to the appointment of titular Bishops in Canada. He succeeded in both and returned to Canada in 1826. At the same time he was created Bishop of Regiopolis, or Kingston.

⁴ "The First Catholic Diocese of Upper Canada," by Rev. G. Corbett, V. G.

But what became a source of great solicitude and anxious care to Bishop Macdonell was the need of securing a sufficient number of priests for the ministration of religion in his vast diocese with its ever-increasing Catholic population. To meet this need the Bishop founded the modest little Seminary at St. Raphael's in Glengarry, which bore the name of the College of Iona. To take charge of this college Bishop Macdonell brought with him on his return from Europe in 1826 Rev. Peter Macdonald, who was for twelve years Vicar General of the Kingston Diocese. Speaking of this Seminary and its work, Chevalier Macdonell in his "Reminiscences of Bishop Macdonell" says:

"This seminary was a very modest affair; but it had the honor to produce some of the most efficient missionaries of the time, among whom may be mentioned Rev. George Hay, of St. Andrews; Rev. Michael Brennan, of Belleville, and Rev. Edward Gordon, of Hamilton." During its existence the little College of Iona educated and fashioned in all fourteen priests. We understand that the old seminary building at St. Raphael's still stands and is now used as a home for aged and retired religious of the Diocese of Alexandria. As the years weighed upon the venerable form of Bishop Macdonell he looked for the appointment of a Coadjutor to aid him in the episcopal administration of his vast diocese, stretching from the boundary of Quebec on the St. Lawrence to the head of Lake Superior. With this in view, a Mr. Thomas Weld, a descendant of one of the oldest Catholic families in England, who on the death of his wife had taken orders, was selected and consecrated Bishop of Amycla and Coadjutor of Upper Canada the 6th of August, 1826. By the advice of his friends and medical advisers, Bishop Weld, however, remained for some time in England and then went to Rome, where in March, 1830, he was nominated Cardinal by Pope Pius VIII. This proved a severe disappointment to Bishop Macdonell, who, it is said, had built the presbytery and Church of St. Raphael's in anticipation that Bishop Weld would be his Coadjutor. Dr. Murdoch, of Glasgow, was then nominated by the Propaganda as Coadjutor to Bishop Macdonell, but his nomination proved only a second disappointment to the venerable and aged Bishop of Kingston, as Dr. Murdoch was appointed Bishop of Glasgow. Bishop Macdonell finally sought to secure as Coadjutor Father Larkin, of the Sulpician Seminary, Montreal, but in this he met with but a further disappointment. At length in the autumn of 1833 the Bulls arrived for the consecration of Bishop Gaulin as Coadjutor Bishop of Kingston.

All this time Catholicity had been growing apace in the wide-extended vineyard committed to the care of this great missionary

Bishop whose life had been spent in toil and sacrifice in every field whither God's finger had pointed the way. Owing to the great influx of immigrants, the Catholic population of Upper Canada had increased rapidly between the years of 1826 and 1834. According to Dr. Thomas Ralph's valuable work, "Canada and the West Indies," the Catholic population of Upper Canada in 1834 was 52,428 and the total population of the Province as given in the official census 321,145. As an evidence of the rapid growth of Catholicity during the episcopal reign of Bishop Macdonell it may be pointed out that the seven priests who constituted the entire clergy at the time of the erection of Upper Canada into a diocese in 1826 had in eight years increased to twenty and more than twenty-five churches had been built or were in course of erection. In this good work of building churches, of course, the Government aided and granted an allowance also to each Catholic clergyman and teacher. Father Corbett, in his interesting and valuable brochure on "The First Catholic Diocese of Upper Canada," gives us the following facts regarding these Government grants:

"On Bishop Macdonell's return to Canada in 1826 he was appointed the first Catholic Bishop of Upper Canada and the Government settled upon him a salary of £400 per annum, which was afterwards increased to £600. Bishop Macdonell then succeeded in obtaining an increase to the number of his clergymen; some he educated at his own expense and others he received from Europe; and the Government allowed him the sum of £750 to be distributed among his clergymen and ecclesiastics. In the year 1830 this sum was increased to £1000. In the year 1832 the Provincial Government granted £550 towards the building and repairing of Catholic churches, and in the following year the grant was increased to £900; but shortly afterwards William Lyon Mackenzie and his radical associates prevailed upon the home Government to issue no more money for religious purposes, and in consequence several churches which were then in progress could not be finished."

And now we have well-nigh reached the eve of the Canadian Rebellion of 1837. This flamed out almost simultaneously in Upper and Lower Canada. The respective leaders were William Lyon Mackenzie and Joseph Louis Papineau. The latter had been already the bearer in 1823 of a petition to the Prime Minister of England, Right Hon. Viscount Sidmouth, signed by 60,000 French Canadians, giving expression to their opposition to the legislative Union of Upper and Lower Canada. That there had been grievances in both Quebec and Ontario goes without saying. It was the old, old story of a ring or "family compact" endeavoring to control legislation in

their own interests. Bishop Macdonell well knew of these abuses and wrongs, but he rightly believed that these grievances should and could be redressed by a resort not to arms, but to constituted methods. In Bishop Macdonell's address issued to the Irish Catholics of Upper Canada the year following the Rebellion the great prelate-statesman, whose patriotism and wisdom had been recognized in 1830 by Sir John Colborne, the Governor General of Canada, in his appointment as a member of the Legislative Council, sets forth in these words his opinion of the work of the Government at this time as well as the character of those who had fomented the Rebellion:

"In exculpation of the Canadian Rebellion little can be said—the Canadians had no real grievances to complain of; they paid no tithes but to their own clergy. No taxes or any other burden but what was imposed upon them by laws of their own making; their religion was not only free and uncontrolled, but encouraged and protected by the Government when threatened to be shackled by their own Catholic Assembly; parishes were multiplied by the consent of the Government and subscriptions were raised by Protestants and even by representatives of His Britannic Majesty to build the churches; in a word, the French Canadians lived freer, more comfortably and more independently than any other class of subjects perhaps on the whole surface of the globe; and they were perfectly contented and seemed quite sensible of the blessings they enjoyed under the British Government till the folly and madness of irreligious Papineau, atheistical Giraud and Camelion O'Callaghan, of the Protestant Nelsons, Browns, Scots and others of that kind who, taking advantage of the ignorance and simplicity of the unfortunate *habitants*, made them believe that they were groaning under a galling yoke which they did not feel but in imagination and succumbing under unsupportable burdens which had never been laid upon them."

Notwithstanding, however, Bishop Macdonell's loyal defense and support of the Government, he well knew that all was not well in the legislation of the country, but he believed that these wrongs could be best righted by constitutional means. Indeed, in this same address the Bishop states that one of the causes which aided the leaders to foment the Canadian rebellion was the abuse and reviling poured upon the Canadians by the ultra-loyalists and the utter contempt in which they were held by persons of different extraction. And in this Bishop Macdonell was decidedly right. It was the arrogance of the "family compact" that brought on the Rebellion. In Upper Canada, too, both the alien law and the clergy reserves gave much dissatisfaction. Add to this a little coterie or "family compact" represented in the Legislature were cornering all the good things. Members of

the Legislative Assembly were voting on their own appointments to fat offices and places of emolument. Even Sir Francis Bondhead, the Lieutenant Governor of the Province, had the effrontery and folly to tell the members of the Executive Council that it was their duty to serve him and not the people. In a word, the great evil lay in the lack of a Government responsible to the people.

Of course, the Rebellion ended in a fiasco in both Upper and Lower Canada. The rebels made something of a stand—but a futile one—at St. Eustache, a few miles from Montreal, and at Montgomery's Tavern, a few miles north of Toronto. The net profit of the Rebellion was the introduction into Canada of responsible government which followed Lord Durham's report to the home Government. Not only did Bishop Macdonell bear a conspicuous part in quelling the Rebellion and holding the Catholics in loyalty to the Crown, but it is said that when the regular troops went from Kingston to dislodge the rebels or "patriots" who had entrenched themselves near Prescott, Bishop Macdonell took charge of the Kingston garrison entrusted to the Frontenac militia. Bishop Macdonell, it may be truly said, had but a sole aim in all his work—the advancement of his people and the advancement of his adopted country. He was both a great churchman and a great patriot. Heedless of himself, given to every sacrifice, he labored in humility, suffering innumerable privations as a true Bishop of the Church of God for the salvation of souls. His was indeed a true self-denial, a true humility.

Writing to Rev. Father La Sournier, of the Sulpician Seminary, Montreal, soon after his consecration as Vicar Apostolic of Upper Canada in 1820, this truly great and humble Bishop said :

"I not only excuse and forgive all those who take the liberty of thinking and speaking unfavorably of me, but I am perfectly satisfied that I ought to receive curses and contradictions and even persecutions for justice sake with joy and perfect submission to the will of the Almighty. What gives me real concern and makes me tremble is my own deficiency and the reflection that my unworthiness may be the cause of retarding the course of religion in these missions."⁵

As we have already stated, Bishop Macdonell was called to occupy a seat in the Legislative Council of Upper Canada in 1830, hence his title of "Honorable." He did not seek it—in truth, he but accepted it that he might be the better able to advance the interests of his Catholic people. Referring to his appointment to the Legislative Council in a letter dated July 29, 1830, to his friend, Mr. John Menzies, of Blair, near Aberdeen, Scotland, the Bishop wrote :

⁵ Church Archives, Kingston.

"It is an honor of which at my time of life and succumbing under an overwhelming load of business in the way of my calling I ought not to be ambitious, nor would any other consideration induce me to accept of it but the hopes of being able to carry measures for the benefit of the Catholic religion through the Provincial Parliament with greater facility and expedition than I could otherwise do."⁶

Bishop Macdonell was indeed ever on the alert to see that Catholics received just representation in public offices and his personal influence as Bishop and citizen holding ever the broadest and most patriotic views gave the Catholics of Ontario a prestige and place in the public esteem and favor of the Province which they otherwise never would have held.

As an instance of this watchfulness on the part of the Bishop to secure proper representation for the Catholics, the following letter addressed to the Very Rev. W. J. O'Grady, of York (now Toronto), will bear witness:⁷

"St. Raphael's, Nov. 30th, 1830.

"Rev. Sir: I beg you will thank His Excellency for mentioning the reasons why he did not make certain appointments to the magistracy. You may also say to His Excellency that, being personally acquainted with the major part of the magistrates of Upper Canada, I do not hesitate to say that one-half of them, not to say more, are not better qualified to discharge the duties of Justice of the Peace than every one of those I recommended in Kingston, and you may add that it is my full conviction that until a certain portion of Catholics get into the commission of the peace there will never be peace and security in the Province.

"There are secret foldings in the magistracy of Kingston which I could develop if necessary; for the present suffice it to say that there is a knot or junta of magistrates in Kingston as exclusive and hostile to Catholics as any corporation in Ireland who will never admit a Catholic into their body if they can, more especially an Irish Catholic. I remain, reverend dear sir, yours sincerely,

"ALEXANDER MACDONELL, Episp. Reg."

Bishop Macdonell lived at St. Raphael's, in Glengarry, till 1830, when he took up his residence in the see city of Kingston. During the remaining ten years of his life the Bishop resided part of the time in Kingston and part of the time in Toronto, taking up his residence in the latter place because his duties as a member of the Legislative Council demanded his presence at the seat of Government. In every corner of Ontario linger abiding memories of this great

⁶ Church Archives, Kingston.

⁷ Church Archives, Kingston.

missionary-prelate who, cradled amid the vales and hills of Inverness-shire, Scotland, and educated under the alien skies of France and Spain, brought with him to the New World the strong and endearing gifts of a Celtic soul—the burning faith that flamed in Catholic Highland hearts through the darkest nights of persecution, building in a newly found home new altars of sacrifice, new altars of divine service, erecting temples to God upon the shores of the Georgian Bay, where the Manitou Spirit haunts the lakes and isles or where early missionary Jesuit and Recollet blessed the soil with footsteps of faith, where Quinte's placid tide lies in deep and peaceful dream and its fringing waters once reflected its dark and forest-clad shores. But nowhere are the memories of this great statesman-prelate and man of God so strong, sacred and vital as in his beloved Glengarry, which in missionary sowing has been so fruitful in heroism and faith. St. Raphael's, his pro-cathedral for many years, is still a shrine for pilgrims. Here is a pen picture of St. Raphael's and its setting from a gifted Catholic writer who visited more than thirty-five years ago this goodly vineyard once tilled and watched over by Bishop Macdonell: "Alongside of the military road you go under elms of giant height until you reach the quaint old hamlet dedicated to 'Raphael the healer, Raphael the guide.' Village there is none; only a postoffice and store, an inn, a schoolhouse, two cottages with a church presbytery and college. The former stands on the brow of a hill and is remarkably large and lofty for a country church. Entering you are struck by the grandeur of the vast roof unsupported by pillars or galleries. The sanctuary is formed by a rood screen dividing it from the passage that connects the sanctuaries. . . . Near the church there was a building called a convent, but Bishop Macdonell never succeeded in obtaining nuns for the mission. The enclosure across the road is occupied by the presbytery and the college is now used as a chapel, in which Mass is said daily and in which when the writer first saw it the descendants of the mountaineers were repeating the rosary on a golden May evening. The Bishop's house is a spacious stone mansion capable of accommodating many persons. . . . From the wall of one of the rooms in which he lived the grand old Bishop's portrait looks down on his people. It shows a man of commanding figure and noble and benign aspect, withal bearing a striking resemblance to pictures of Sir Walter Scott."⁸

But the sun is hastening down the west and the golden jubilee of Bishop Macdonell has illumined the skies. Fifty years have stretched across the centuries from 1787 to 1837 and rounded out in the vine-

⁸ Mrs. Berlingust (nee A. M. Pope) in "Catholic World," October, 1881.

yard of God this great and good man's life and labors. The celebration of the event touched with joy irrespective of race or creed the heart of the entire people of the Province. The ceremony took place in the parish Church of St. Raphael in the presence of two thousand people. The Bishop of Montreal and many of his clergy desired to be present, but were prevented by the severity of the weather. The Bishop addressed his countrymen before Mass in Gaelic, their maternal tongue. After narrating the progress that had been made in religion in the Province during his episcopal reign, Bishop Macdonell begged the forgiveness of his people for any bad example he had given them and for any neglect or omission of his duty during his ministry among them for so many years, begging of them their prayers and supplications at the throne of mercy in his behalf. In 1837 a project very dear to Bishop Macdonell's heart was put into practical effect. It was the establishment and endowment of a seminary at Kingston for the education of the clergy. Having obtained a charter from the Legislature, the corner-stone of the college was laid on June 11, 1838, Bishop Macdonell officiating, assisted by his Coadjutor, Monsignor Gaulin, Vicar General Angus Macdonell and others of his clergy. This seminary, known as Regiopolis College, which for thirty years was the nursery of some of the most zealous, pious and gifted priests and prelates of the Province, was obliged through lack of funds to close its doors in 1869 on the withdrawal by the Legislature of all grants to denominational institutions. In the summer of 1839 Bishop Macdonell set sail for England for the purpose of collecting funds for his newly established seminary. From England he went to Ireland, accepting the invitation of the Earl of Gosford, former Governor General of Canada, to visit him at Gosford Castle near Armagh. While traveling in Ireland, Bishop Macdonell contracted a cold which settled in his lungs. He shortly after set out for Scotland, arriving at Dumfries on January 11, 1840. Under the care of Rev. William Reid, the parish priest of that town, whose guest the Bishop was, he seemed to have become apparently restored to his usual health. On the night of the 14th, however, he grew weak and, a physician being called in, Father Reid administered to him without delay the rites of the Church. A few minutes after the great and heroic Bishop Macdonell breathed his last peacefully as a child. The funeral service was held in St. Mary's Cathedral, Edinburgh, the sermon being preached by Bishop Murdoch, of Glasgow. At the conclusion of the ceremonies the body was removed to St. Margaret's Convent and placed in the vaults beneath the chapel pending such arrangements as should be made for its removal to Canada. In 1861 his remains were brought to

Kingston by Bishop Horan and committed to their last resting place beneath the Cathedral, in the midst of the people he had loved so well in life.

The first Bishop of Ontario was indeed a great and noble personage. He laid the foundations of Catholicity in this Province wisely and well. Bishop Macdonell became the chief pastor of Upper Canada when there were in it but seven priests and about twenty-five thousand Catholics. Now Ontario has a Catholic population of five hundred thousand, attended to spiritually by nearly six hundred priests. The mustard seed planted by the great and heroic Bishop and patriot has indeed blossomed and burgeoned till it has become a mighty tree of spiritual comfort and joy to the many who seek a quickening life and shelter beneath its heavenly branches. The old Diocese of Kingston, or Regiopolis, now an archdiocese, benignly ruled to-day by Most Rev. Archbishop Spratt, D. D., has broadened and expanded into other episcopal sees; Catholic colleges, convents and schools crown our cities and towns with their turrets and towers; the life of Catholicity has grown apace intellectually as well as spiritually, but it never should be forgotten that the triumphs and conquests of the Cross to-day in Ontario have been made possible through the zeal, heroism and devotion of the Right Rev. and Honorable Alexander Macdonell, first Bishop of Ontario.

THOMAS O'HAGAN.

Toronto, Ontario.

FLOWERS FROM "LITURGICA HISTORICA."

SOME of the best books that have been written are sometimes said to be books about books. This is an article about a recent most important book, and in no sense a critical review, for the many recondite questions with which it deals are fraught with burning controversy (the author was an expert of European fame in liturgiology and ecclesiology), so that the present writer has no desire to step in "where angels fear to tread." The book for various reasons is not within the reach of every one, nor would some of the subjects with which it deals interest the so-called general reader; nevertheless, learned as it is, it contains so much of genuine human interest that we hope a short account of it will be acceptable. It is a collection of liturgical and antiquarian articles, the posthumous work of the late much-lamented Mr. Edmond Bishop; the first part consists of antiquarian papers, originally published in the "Downside Review."

Incidentally, short biographical sketches of various mediæval writers, monks, abbots, Bishops, are introduced, persons with whom most educated people have a bowing acquaintance and are glad to learn to know them a little better, curiosity in some form or other being a universal trait. Mr. Bishop had a happy knack of seizing on interesting personal characteristics and of illuminating his sometimes rather dry matter with pen-pictures of men, places and scenes. He had the prophet's gift of resuscitating dry bones and making dead men live and speak. To change the metaphor, to turn the pages of "*Liturgica Historica*"¹ is like walking through a garden of herbs, redolent of lavender, marjoram, of basil and rosemary, interspersed with old-fashioned flowers. It is the flowers we propose to gather here.

Mr. Bishop's marvelous memory, his indefatigable zeal in ransacking libraries, his extraordinary eyesight, which enabled him to read faded manuscripts and detect suspicious glosses and superscriptions, his industry in taking notes of all he read, combined to give him remarkable power for describing the long dead people and past scenes with which his studies brought him in contact. Yet all this is only the lighter side of his work, the ripples on the deep waters of liturgical study. Into these depths we shall not presume to plunge, though we may occasionally, when the stream is very clear, catch a reflection of them here and there. In the first chapter the author deals with the genius of the Roman rite, which he sums up as characterized in two words, soberness and sense, and he dis-

¹ "*Liturgica Historica*," by Edmond Bishop: Oxford, Clarendon Press, 1918.

criminate between what is Roman and what is Gallican, or evidently non-Roman in our present missal. It will certainly surprise many readers, especially Protestants, to learn that it is precisely those things in our religious services which are popularly believed to constitute "Romanism," and are supposed by them to show sensuousness in Catholic ritual, which are originally not Roman at all, but in the course of the ages have been imported and added to the original simplicity of the Mass, which was more consonant with the genius of the old Romans.

All censuring of the altar, of the elements, of persons, was alien to the spirit of Roman rite, and was of later introduction; only twice during Mass was there any elaborate ritual—once at the processional entry of the celebrant to the altar and again at the singing of the Gospel. And here we get our first pen-picture, a vignette of this entry. Seven acolytes bearing lighted torches, seven deacons, seven subdeacons, one carrying a censer, preceded the celebrant, often the Pope himself, and his ministers to the altar, all vested in chasubles, as the Introit was sung by the choir ranged on either side of the sanctuary. Here, too, we get a hasty sketch of Charlemagne, said to be "ten times more the sacristan than Joseph II., who was called on one memorable occasion "*mon frere le sacristain*." Charlemagne "made wars, he made laws, he made himself Roman Emperor, he loved letters; but he enjoyed his ecclesiastical administration and Church business of all sorts, in every detail, ritual and other. Never was he more pleased with himself than when presiding in his own chapel and setting everybody to rights." Charlemagne adopted the Gregorian Mass book used in Rome, but to suit the French he caused additions to be made to it from the liturgical books already found in France.

In another paper we get a glimpse of Charles as a pilferer, robbing the art treasures of Ravenna, then "the Queen of the Adriatic," to enrich his new church and other buildings at Aix-la-Chapelle. To do this he salved his conscience by asking permission of Pope Hadrian I., who gave him leave to pull up and down and take away the marbles and mosaics of the palace, on the floors and on the walls and other examples of Ravenese art. Charles, says our author, "was full of greed, and there was none to say him nay or effectually thwart his will." There were three early sacramentaries or Mass-books of the Roman Church—the Leonine, the Gelasian and the Gregorian. There was a Supplement attached to the Gregorianum which was composed by the Englishman Alcuin, and sent by this same Pope Hadrian I. to Charlemagne at his request. Mr. Bishop also considers that Alcuin was the author of the celebrated Preface, "*Hucusque*," to the Supplement to the Gregorianum.

Alcuin or Albinus was a Yorkshireman (735-804). He was educated at the York Theological School, of which, as of the library attached to it, he eventually became the master until he was invited by Charlemagne to settle in France. He did so in 782, and received the abbeys of Ferrières, St. Loup at Troyes, and St. Martin at Tours. He was a great scholar and had had access to all the best English libraries. At one time he was abbot of St. Josse-sur-Mer, but he was frequently an absentee; when there he was on intimate terms with the monks of St. Riquier, whose abbot was a great friend of his, of whom, as we shall presently see, Mr. Bishop gives one of his charming little sketches. An item in the inventory of St. Riquier quoted by our author confirms his opinion as to the compiler of the Gregorian and Gelasian missal, and as to the reviser of these two sacramentaries, for the inventory includes "A Gregorian and Gelasian missal arranged by Alcuin." To sum up Alcuin's part in arranging our present missal, we must quote the following paragraph from the article on the Gelasian Mass-book:

"In liturgy after Alcuin all is changed; a leveling hand has passed over the particularism that before prevailed; liturgical texts assume a more uniform tenor, their color is less varied and local. The older liturgies have almost everywhere been put out of use and the copies of the Missal become uniform 'under reserve.' But at least this result was attained: since Alcuin, the only Missal in use is the Gelasian-Gregorian compilation. The older liturgies, the pure Roman, the Gallican, and at length the Mozarabic, disappear to give place to a common and universally accepted rite, based as its main factor on Roman observance. And this is what Charlemagne had willed should be. In a word, it is the Englishman Alcuin who had been the instrument to settle the structure and tenor henceforth of the liturgy of the Western Church." Surely this is a most interesting fact for all English-speaking peoples, and one of which the English may well be proud. The work of the English Protestant reformers when they swept away the Mass must have made Alcuin turn in his grave. He was not overfond of revising sacramentaries, for when asked by Eanwald, Archbishop of York, to do so, he refused and asked what need there was to draw up a new when an old would suffice. True, he obliged Charlemagne when asked by so powerful a monarch to do so, but this was because, Mr. Bishop says, "he had a strong sense of powerful and paying patronage." He had an eye to the loaves and fishes; moreover, Charlemagne was not a person a wise man would thwart, especially in a matter in which the Emperor took so keen an interest as liturgy. Alcuin was a great letter-writer, and his style at times seems to have been exceedingly direct, judging from a letter to Eliphandus, Bishop of Toledo, with whom he had a controversy as to the To-

ledan missal, in which he alludes to Hildephonsus and the Adoptionist theory in terms of fine scorn. As an example of dealing faithfully with an opponent in the eighth century, we quote the following passage from the paper on "Spanish Symptoms":

"It is better," says Alcuin to Eliphandus, "to give credit to the testimony of God the Father as to His own Son than to your Hildephonsus, who composed such prayers for you in your Mass as the holy and universal Church of God knows not. Nor do we think God listens to you when you say them. And if your Hildephonsus in the prayers he wrote called Christ 'adoptive,' our Gregory, Pope of the Roman See and doctor renowned throughout all the world, in his prayers never hesitated to call Him the sole begotten One." Alcuin also compiled the burial service in the Caroligian Supplement, and in so doing "made a clean sweep of nearly the whole of the twenty or twenty-one prayers found in these services in Gaul throughout the eighth century, and substituted for them new Mozarabic material." In the article of Angilbert's *Ordo* we get a full-length portrait of Alcuin's great friend, the abbot of St. Riquier, who was also one of Charlemagne's most intimate friends, if not his greatest. Angilbert was brought up in the Frankish court from his earliest years and was chosen by Charlemagne to be the "governor, ruler, guide and mentor" of his son Pepin, while he was quite young himself, and Pepin had just been crowned King of Italy, so that Angilbert's office was no sinecure. But he appears to have been quite equal to the task, for he was a most courteous knight, a polished courtier, a great scholar, and evidently a man of great charm and fascination for men as well as for women. Alcuin's letters frequently allude to his great affection for Angilbert, calling him "his sweetest son, his most dear son, inheritor of my scholarship." Charlemagne seems to have shared this admiration, since he sent for Angilbert to his court and placed his son under his care. Another task he set Alcuin was to correct the current version of the Bible. But Angilbert found favor with the gentler sex also, although gentleness does not appear to have been the leading characteristic of the lady who married him. Charlemagne had two daughters, and Bercta, the younger of the two, seems to have been a very masterful young woman, the "very picture of her father." A feminine Charlemagne must have been a difficult problem to tackle, and this one, having chosen to fall in love with the most attractive man in her father's court, wooed and won him. She was evidently a somewhat masculine woman, with a deep voice and a proud, imperious manner, fond of the chase and exceedingly fond of splendid attire. She bore Angilbert two sons, one of whom inherited his father's literary talents.

Angilbert had among his numerous gifts a talent for diplomacy, for which his personal charm well fitted him, and three times he was sent by Charlemagne as Ambassador to the Pope. In 793 he became lay-abbot of the great and most famous monastery of St. Riquier, near Abbeville. This monastery he practically refounded and enriched it with costly vestments, altar plate and a large collection of valuable books. For eight years while living as a courtier enjoying all the pleasures of a wordly life he continued to restore and contribute to the enrichment of St. Riquier, and then quite suddenly he left the world, the court, his wife, children and all that had hitherto been his interests and buried himself as a monk in the monastery of St. Riquier, of which he of course became the abbot. It was partly by Alcuin's advice that he did so, but he was always a man of deep religious feeling, and when Alcuin wrote warning him against the dangers of the world to his soul, in an age when people thought more about their souls than they do now, and Adalbert, afterwards abbot of Corbie, seconded Alcuin's appeal, Angilbert gave up his imperious spouse and left the world and its temptations and went and buried himself in St. Riquier. History, so often silent when we most wish her to speak, does not tell us what Bercta had to say to this, but in any case Angilbert followed Alcuin's advice. A faint idea of the splendor of this old monastery may be gathered from the inventory of St. Riquier, taken while Angilbert was abbot, when to mention only one item in 800, no less than 200 cappas are mentioned, which had increased to 371 in 831. These cappas are sometimes believed to have been copes, but Mr. Bishop thinks they were more likely cloaks worn by the monks in choir; one is described as of "castanea" ornamented with gold, and this he thinks was not a cope, but a grand ornamental cloak, worn by one of the princely abbots of this great monastic house.

One of the earliest allusions to an Office for the Dead with matins and lauds as we have it is in the Ordo of St. Riquier, drawn up by Angilbert, in which he prescribes it to be said every day. In his article on this Ordo of Angilbert, Mr. Bishop describes this monastery of St. Riquier, a very handsome pile of buildings just outside the little village of that name near Abbeville. Part of the monastery is Gothic and part Renaissance, but the beautiful church is pure fourteenth century Gothic and well worth visiting. Mercifully it is too far west of Amiens to have suffered from the iconoclastic propensities of the modern Huns in the Great War, who if they had had a chance would doubtless have delighted in destroying such an architectural gem, but the inhabitants of the little village of St. Riquier on the Somme must often have trembled, for they were well within the noise of the guns and the reach of air-raids. Angilbert was

buried in the church in front of the choir, but no monument marks his resting place; nothing but an humble flagstone.

In a long note to the article on Angilbert's *Ordo* is a description of the Rogation days' procession in the village of St. Riquier in Angilbert's time, and a very imposing sight it must have been. Seven parishes took part in it, and the number of the monks alone was so great that had they walked in pairs their part of the procession would have been a mile almost in length. So they and all the rest who took part in it walked in sevens. It was headed by seven crosses, then came seven thurifers with thuribles, then seven deacons, then seven subdeacons, and then the monks in sevens, and then the inhabitants of the seven parishes in sevens, according to their social ranks, being less democratic than we now are. They sang psalms and prayers and several long litanies, all the people joining in as they proceeded from the monastery all round the village back to the monastery again. They sang in Latin, of course, the language of the Church, and had no nonsense about not understanding it, familiar as the responses to the litanies are to all Catholics. But we must not linger more over Angilbert and his friend Alcuin, St. Riquier, and Charlemagne. There was a certain Honorius of Autun, a most voluminous writer of the twelfth century, who once lived part of his life as a recluse, and whose obscure history must have provoked the curiosity of some readers who have come across him, on whom a sidelight is cast in the paper on the Cope. He was a secular priest living in France till 1120, when he passed into Germany. From his own writings we gather that he lived for some years of his life as a recluse, but he does not tell us where. From other sources we learn that he filled the office of dom scholasticus in the church of Autun. A dom scholasticus was that canon of a cathedral chapter upon whom devolved the superintendence of the schools in connection with it. After Chrodegong's chapter was constituted each cathedral had connected with it an educational establishment to which boys or youths who wished to consecrate themselves to the priesthood were sent and subjected to proper training; there were also colleges for clerics and collegiate schools, all of which were under the direction of a canon and the general superintendence of this dom scholasticus. Honorius filled this office, as we have said, at Augustodunum, which Mr. Bishop in common with French writers decides to be Autun, while, on the contrary, German authors, anxious to claim Honorius as one of themselves, believe it to be Augsburg, but the Latin name for Autun is Augustodunum, and for Augsburg, Augusta, so the German claim to him falls to the ground. It is true that the most numerous copies of his works are found

in Austria and Bavaria, and there he seems to have left great influence on the spiritual life.

On the title page of his "*Gemma Animæ*" he describes himself as a solitary and a recluse, "*solitarius et inclusus*." Recluses were sometimes enclosed for a time only; sometimes for a penance, sometimes their health failed, and sometimes they lacked perseverance in this severest form of asceticism. In the case of Honorius it was probably the lack of books and the use of a library, which was indispensable to him to continue his literary work, that induced him to return to the world. He was a scholar, a theologian, an historian, and we may perhaps say a poet, for some of his works were written in blank verse. He wrote specially for the benefit of poor priests, who had no access to books. He left France in 1120, and passed into the territory of the Emperor, and wrote his most popular work, "*Gemma Animæ*," and his "*Sacramentarium*," which last, the author of "*Liturgica Historica*" says, has been unduly neglected. Honorius describes "the cope as the proper vestment of cantors, with a hood at the top, open in front, reaching to the heels and with fringe at the bottom."

It would seem from the evidence that mediæval communities considered it the proper vestment for monks, for they were exceedingly fond of decking themselves out in copes, as our author shows. For instance, at Cluny on the greatest feasts, such as the Assumption and All Saints, all the community wore copes at High Mass, and twelve of them, all in copes, sang the Introit in the middle of the choir. At Vannes the brethren assisted at Mass in copes on Palm Sunday. At Einsiedeln, on the feast of the Purification, on Palm Sunday, at Easter, and at the third Mass on Christmas Day all the brethren wore copes. One wonders where these large monasteries got all these copes from, and if they were as gorgeous as some of our modern vestments. This practice does not appear to have been introduced into England; at any rate, not to the extent it prevailed in France and Italy. A curious example of the irony of life is exemplified in the history of the feast of the Immaculate Conception of Our Blessed Lady. This doctrine is well known to be one of the greatest stumbling blocks of English Protestants on their way to the Catholic Church, and yet England was the country in which this beautiful feast was first celebrated. In his article on the Immaculate Conception Mr. Bishop says he believes the origin of the feast was due to the monks of Winchester, the disciples of St. Ethelwald. All the evidence goes to prove that it was established in England before the Norman Conquest. It is mentioned in several old calendars of pre-Norman date, which he cites as conclusive evidence of the antiquity of the feast in England.

This does away with the theory which attributes its origin to St. Anselm, and also with another document which attributes it to a rather pretty legend.² The story goes that a certain abbot of the abbey of Ramsey, named Helsin or Elsi, was sent on a diplomatic mission to Denmark by William I. soon after the conquest of Britain, and that on his return journey there was a storm and the ship was in danger, when an angel appeared to the abbot and told him that if he would establish a feast in honor of the Immaculate Conception of Our Lady the lives of all on board and the ship should be saved. The abbot vowed to do this, and the storm subsided and all landed safely, and the abbot subsequently fulfilled his vow and established the feast, which became one of the most popular in mediæval England, our Lady's dowry.

In the present day the Divine Office is usually considered sufficiently long, especially by those who are also bound to say on certain days the Little Office of Our Lady as well, but in mediæval times the accretions to it were very numerous and must have been a great burden to some of the monks and nuns. For instance, from the "*Concordia Regularis*" we learn that in the tenth century in England the preliminaries to the Divine Office of Matins were the seven penitential psalms, certain prayers and the fifteen gradual psalms. Besides Lauds of the day, the monks said Lauds of All Saints at another chapel, and Lauds of the Dead, Prime, the penitential psalms and the Litany. In the evening after the preliminary prayers, Vespers of the day, Vespers of All Saints, Vespers of the Dead and Matins of the Dead were sung. The time-table varied in summer and winter, not in the quantity of devotions, but in the time at which they were said or sung. At Easter and the great feasts these supplementary devotions were omitted, but on all the ferial days throughout the year they were "*de rigueur*." By degrees the office for All Saints was replaced by the office of the Blessed Virgin. In England from the close of the tenth century to the Conquest devotion to Our Lady spread in a very noticeable manner, but whether the office of Our Lady was said in addition to the Divine Office daily or as the votive office on Saturday is uncertain. One thing Mr. Bishop says is certain, namely, it was not introduced here by Norman monks; on the contrary, if they found it the custom they probably abolished it as "*Englishry*," of which they seem to have had great contempt. It was in use on the Continent, at least as a private devotion of priests, in the middle of the tenth century, as a little story cited by our author goes to prove. It is told of Berengarius, Bishop of Verdun (940-962), who going into the church one night, long before matins were

² Catholic Encyclopedia.

due, for private prayer as was his custom, he stumbled over the Provost Bernerius, who was lying prone on the floor in the dark, saying the Little Office of Our Lady. All these additional devotions, psalms, etc., were found in the Prymer, the favorite lay folks' prayer-book of the Middle Ages in England.

In this article on the Prymer we are examining we get a pen-picture of St. Benedict of Aniane, with whom some of these additional devotions appear to have originated. He was born in the south of France in the middle of the eighth century and became a monk in a Benedictine monastery near Dijon, but he was of so ascetic a temperament that he was wont to say that the rule of St. Benedict was only for weaklings, and he adopted a much severer rule for the monasteries he founded. He left Dijon after a time and founded a monastery near Aniane, in his own country; here he built a church and an abbey and adopted a very strict rule, resembling that of the Cistercians. At first he allowed no silk vestments, and would only permit the use of a wooden chalice; then he got to a glass one, and finally permitted it to be made of tin, possibly because of the danger of the glass ones being broken, and wooden chalices were forbidden. As time went on he mitigated the severity of his rule. He dedicated the church to the Holy Trinity instead of to any saint, which was an innovation quite unheard of at that time. He now came under the notice of Lewis, King of Aquitaine and son of Charlemagne, and gained a great and increasing influence over him. When Lewis became Emperor he summoned Benedict to live at his court, not indeed in the palace, but in a monastery for thirty monks, which he founded at Aachen or Aix in order to have Benedict near him, and here he spent the rest of his life. It was Benedict's accretions to the Divine Office which afterwards found their way into the English Prymer. Incidentally we learn from this paper that all popular devotions took their origin from monasteries; it was the piety of the monks which prompted them, and by degrees they were introduced to the people.

In an article on a Benedictine confrère of the ninth century an interesting sketch of the sort of life led in the early Middle Ages by people in the world desiring to lead a stricter life and enjoy some of the spiritual benefits of the order were admitted as confrères to the Benedictine Order, in a similar way as later Dominican and Franciscan tertiaries became part, a very humble part, but still a part of these orders, though still living in the world. The Benedictine rule for confrères does not appear to have been a very strict one. This particular confrère was one Count Heccard, a rich nobleman of the second or third rank, the owner of an estate at Pecrecy,

by which he was much enriched, given him by the King of Aquitaine. One of Heccard's first acts after receiving this estate was to build a Benedictine priory on it, dependent on the abbey of Fleury. He never lived at Pecrecy, but on another estate at a place near Macon. He was twice married, but had no children by either marriage. His two brothers predeceased him, and his only sister, Ada, was a nun at Faremoutier. The little that is known of him is gathered from his will, from which we learn that he had a good many books for the time in which he lived, and that his taste in books was universal. He had books on law, agriculture, the military art, medicine, canon law, hagiology, besides a good many devotional and religious works. He left a German version of the Gospels to the abbess of Faremoutier, showing that German was understood in French convents by some of the members. Some of his devotional books he left to his sister, then the nun, Ada. He had some engraved jewels and two belts studded with gems; one, "my great belt," was inlaid with jewels which once belonged to his wife Richildis, to whom he leaves it for her life and afterwards to Fleury. He had horses and hounds, falcons and sparrow-hawks, so he was evidently a sportsman. He had also several swords and some military antiquities. He had drinking cups and carpets which he left to several bishops. One very interesting item appears on the list—a gold fork and spoon left to his wife, Richildis. This is interesting, because it is usually said that the first mention of the use of a table fork in Europe occurs in the course of a sermon by St. Peter Damian, wherein he upbraids a certain lady who brought to Venice from Constantinople "a certain gold prong wherewith she actually conveys her food to her mouth, instead of using the fingers God had given her for that purpose." Heccard lived one hundred and fifty years before St. Peter Damian, but that does not say that the use of the fork was general in St. Peter Damian's time; it only proves it was not so rare as the saint thought. Heccard left his domestic chapel and its furniture to his wife first, and then to Fleury. His chapel was by no means richly furnished in comparison with that of one Count Evred of Friuli, quoted in this article, wherein a good many gold and silver articles are mentioned—a comb enriched with gold, a silver fan and a gold reed for Communion. This last item was of course used for administering Communion before the chalice was denied to the laity. In two articles on "Spanish Symptoms" Mr. Bishop has much to say on the influence of the Visigothic Church of Spain on the insular churches of England and Ireland. The extent of this influence on Ireland is gathered from a miscellaneous work known as the Book of Cerne of the

ninth century, but both these papers are too learned and technical, not to say also controversial, to be dealt with here, where we are only touching on the lighter side of this interesting book.

Another article is on "Leaves from the Diary of a Papal Master of Ceremonies," in which we get some delightful bits of mediæval, dare we say it, gossip? Fortunately for the curious, these masters of ceremonies at the Papal court had the habit of keeping a diary, to which they sometimes confided some of their opinions of men and things, but one Catullus, a liturgist, summed them up as "an ignorant set," which was impolite and not exactly true. Our author quotes from one of these diarists named Paris de Grassis, who was master of ceremonies to Pope Leo X. in the sixteenth century. Mr. Bishop describes de Grassis as "fussy and a flunkey-born, but a faithful servant," although self-satisfied. He describes the meeting of the Pope with Francis I., King of France, at Bologna, at a time (1515) when the Bolognese were in a sulky mood, and after saying that he had been busy for two or three days preparing for the meeting, "there was no order, no preparation, no sign of joy or festivity." In fact, the Bolognese seem to have left undone all those things which they ought to have done on such an occasion, and done all those things which they ought not to have done. The Pope happily took it all very sensibly and good-humoredly, which was more than his master of ceremonies did, as an excerpt from his diary will show: "The clergy did not come to meet him at the gate of the city, though the Cardinal was there to offer him the cross to kiss, but no cross had been brought, so a simple rude one was fetched from a church close by. Two canopies were brought by the *facchini*, or public carriers, things at the sight of which the Cardinals (there were twenty in Leo's train) burst out laughing. The one for the Blessed Sacrament was of serge, the one for the Pope was of a common stuff, old and worn, and covered with stains. To offer such a thing to the Pope was not only ridiculous, but most infamous. I said to the Pope that it was nothing less than criminal, and all the Cardinals were most indignant. But the Pope took it very quietly, and only ordered an equerry to give a canopy of gold and silk for the Blessed Sacrament, and said he himself had no need of one."

Nor was this all; the master of ceremonies had ordered one hundred young men to meet the Pope, and of these only twenty appeared, and these were not suitably clad. The Bolognese seem to have recovered their temper on the following day and to have behaved better. The visit lasted several days, in all of which the master of ceremonies was apparently in his glory, for he gives pages of description of what he said and did, how he instructed

first the Pope and then the King again and again as to what they were respectively to do at the High Mass and at various other ceremonies. The King, however, did not always obey the master of ceremonies, but in his zeal to show his devotion to the Holy Father insisted on holding the Pope's train and handing him the towel at the Lavabo, etc. Once when de Grassis told the King he should take off his cap on meeting the College of Cardinals the King turned on him and told him he was not so uncivilized as not to know that, and there was no need to remind him of it, which was decidedly a snub for the unfortunate ceremoniarus. It did him no harm, for he was evidently quite satisfied with himself and all his arrangements for this august occasion. On his departure Francis promised to send de Grassis a horse as a present from Milan, which we will hope he received in due course as a reward for his exertions on this historic occasion.

In the course of "*Liturgica Historica*" we get occasional peeps at some of our old Saxon saints, e. g., St. Ethelwald, St. Dunstan, St. Elphege, St. Edmund of Canterbury, St. Edmund the Martyr, St. Oswin and St. Willibrod, of whom many English people of the present day remember but little and care but less, and yet these men in their day did and suffered much for the Catholic Church. St. Ethelwald (908-984) was first a monk at Glastonbury, where he helped St. Dunstan to reform the monks, and afterwards abbot of Abingdon, where he carried on this work and introduced the rule of St. Benedict and was called the "father of the monks." In 963 he was made Bishop of Winchester, where he restored the old minster and built a number of churches. Mr. Bishop says that both the Winchester monasteries took their cue from him and were the scene of much activity. Painting, architecture, goldsmith's work, history, grammar, versemaking, homiletics, the learned languages, and even science were all cultivated, from which it may be seen that St. Ethelwald was a man of great parts.

St. Elphege, or Alphege, was made Bishop of Winchester in 984, translated to Canterbury in 1006, taken prisoner and murdered by the Danes in 1011. Both these saints were most charitable men, and at a time of famine St. Ethelwald, then Bishop of Winchester, ordered some of the silver plate, in which the minster was very rich, to be melted down and turned into coin and the proceeds given to the poor. St. Elphege, his successor in the See of Winchester, did the same and distributed to the poor the store he had designed for the embellishment of his cathedral.

St. Dunstan, whose story is well known, is mentioned incidentally several times. A certain Litany of the Saints in his Pontifical is quoted in one article; in another we learn that he once lived in a

Ghent monastery, that he consecrated the new minster at Winchester, and that he was invoked in company with St. Elphege and St. Ethelwald in a Litany of the Saints found in an old prayer book which seems to have emanated from Ghent, on which there is a paper.

In an article on "An Old Note Book" an old Latin Sequence from a Mass for the Translation of St. Edmund the Martyr is given in full; it was found in one of the Harleian manuscripts. In this Sequence allusion is made to the story of King Sweyn, "*rex punitur*," and to the wicked Sheriff Leofranc. St. Oswin was an Anglo-Saxon king and martyr. He had a rival named Oswy, in whom he trusted, but who betrayed him. He is described by Bede as a tall man, with pleasant manners and graceful bearing, as the most generous of men and above all humble. His life was written by a monk of St. Albans, and is to be found in the "*Gesta Albanus*"; this author once lived at Tynemouth. Oswin was murdered by one of Oswy's officers at a place called Gilling, near Richmond, in Yorkshire, on August 30, 651, and buried at Gilling. Several centuries later his burial place was made known to a monk named Edmund by an apparition, and his remains were then translated to Tynemouth in 1100. At the dissolution of the monasteries under Henry VIII. his shrine with his relics and vestments were discovered at Tynemouth. In his article on the "Christian Altar" Mr. Bishop tells us that in 1135 the Prior of Tynemouth, Thomas de la Mare, removed this shrine, which was attached to the high altar (and therefore interested our author), and put it in another place so that pilgrims might walk round it, by which we gather that St. Oswin's tomb was evidently a place of pilgrimage and his memory unforgotten after five centuries.

St. Willibrod was the son of St. Hillis, and became the apostle of Frisia (657-736), whither he was sent in 690 from an Irish monastery in which he had spent twelve years. In 695 he was consecrated Bishop of Utrecht, on November 21 by Pope Sergius III., who Mr. Bishop says was the last of a series of Greek-speaking Syrian Popes who came from Antioch and Cilicia. Sergius III. several times had relations with England. St. Willibrod was buried at Echternach on the River Sure, in the easternmost corner of the Grand Duchy of Luxembourg. In 1906 an extraordinary ceremony³ took place on the occasion of the translation of his remains to the new basilica at Echternach. This was a dancing procession in which over 15,000 dancers took part. Five Bishops officiated at the ceremony. In the procession, besides all these dancers, were a number of priests, over a hundred standard-bearers, musicians,

³ Catholic Encyclopedia, Vol. XV.

players, singers and dancers. We can throw no light on the origin of this procession, which is not mentioned in "Liturgica Historica." St. Willibrod interested Mr. Bishop because he was consecrated by one of these Syrian Popes, Sergius III. (687-701), who he says possibly introduced the Agnus Dei into the Mass and the cult of the Holy Cross into Rome. He also mentions a calendar of St. Willibrod's to be found in the Cotton manuscripts, in the British Museum, in which in the original hand are found three feasts of Our Lady. On January 18 we find "adsumpt. Sanctæ Mariæ"; on August 16 an entry corrected in another hand of "nativitas Sanctæ Mariæ," and on September 9 "nativitas Sanctæ Mariæ." Apparently the feast of the Assumption was celebrated in January originally, for in another ancient calendar or martyrology by Oengus we find the 18th of January mentioned as the day of "the great death of Jesus' Mother," and the 16th of August is dedicated to her Nativity.

Among the old calendars mentioned in the course of these pages is the Marble Calendar of Naples, interesting because it records the feast of the Immaculate Conception before it was observed publicly; the Metrical Calendar, the two Winchester Calendars, that of Old Minster and that of Newminster, the Junius Calendar, the Worcester, an Irish one, and one in the Leofric Psalter, one in the St. Albans Breviary, an early Syriac, a Worcester and a Winchcombe Calendar; all these are mentioned in connection with the feast of the Immaculate Conception. In several articles the practice of the reservation of the Blessed Sacrament is referred to incidentally. In the paper on the "Christian Altar" we learn that throughout the Middle Ages the reservation of the Blessed Sacrament was treated in a way we should consider irreverent. It was ordered to be placed on the altar, in a pyx, as Viaticum for the sick, and there was to be nothing else on the altar except a copy of the four Gospels, and some capsæ containing relics of the saints. The mediæval idea of reservation was Viaticum for the sick, not worship, and to look upon our churches as "the home of the Blessed Sacrament" is a later idea. Up to the middle of the sixteenth century in the Cathedral at Verona the Blessed Sacrament was kept in any out-of-the-way corner, until the good Bishop Ghiberti had a tabernacle made to enclose it of marble and crystal, supported by four brass angels, and the whole suspended over the **high altar**, "to excite the piety of priests and people." Suspension, however, Mr. Bishop thinks, was not the universal discipline even in France. "During the whole Middle Ages the usual place of reservation was some recess, or, as it were, cupboard, often enclosed with iron bars, sometimes fairly high up, in the wall on the Gospel, and

more rarely on the epistle side of the altar." As the practice of more frequent Communion increased, the idea of Viaticum fell out and reservation began to be connected with Communion in the Church itself, and then gradually our modern ideas of worship were connected with it. At no time in the Middle Ages was the practice of frequent Communion common among the peasants or country people, says our author.

Here for the present we must take leave of this fascinating book, cordially recommending it to those who are interested in liturgy and history.

DARLEY DALE.

Stroud, England.

CARDINAL XIMENES (1436-1517).

THE biography of Cardinal Ximenes¹ falls within the limits of the most glorious period of Spain's national and religious history. By the marriage of Ferdinand and Isabella and their accession to the respective thrones of Aragon and Castile the independent kingdoms of Spain were united under one common rule, "and the various orders of the monarchy, brought into harmonious action with each other, were enabled to turn the forces, which before had been wasted in civil conflict, to the glorious career of discovery and conquest." It was the age of the "Great Captain," Gonsalvo de Cordova, on the battlefields of Granada and Italy, and of Columbus in the broader field of navigation and discovery. The Renaissance of learning received in Spain a healthy vigor under the patronage of illustrious churchmen and Queen Isabella. Theological science was promoted by Archbishop Talavera and Cardinals Mendoza and Ximenes, while the palace school of Isabella brought the culture of nobles and courtiers to an eminent degree of refinement. This was, moreover, the age of faith. The daring of Spain's navigators and the chivalry of her cavaliers were not superior to these qualities in her saints. Ignatius from an intrepid soldier became the great soldier-saint. St. Francis Xavier was a true knight-errant in the service of his Master, "roving over seas on which no bark had ever ventured, among islands and continents where no civilized man had ever trodden." Then there were St. Peter of Alcantara, St. Francis Borgia and St. Teresa, who were also born in Spain while Ximenes was directing the affairs of the Diocese of Toledo. In this period of Spanish life the biography of Cardinal Ximenes is set. As reformer, educator and statesman he exercised an extraordinary influence on the destinies of his country.

Ximenes de Cisneros was born at Torrelaguna, in the Diocese of Toledo, Spain, in 1436. His parents were both of noble though decayed families; but Ximenes was destined to become illustrious rather by his own deeds. At a tender age, being intended by his good parents for the service of God and the Church, he was sent to the school at Alcalá to study grammar. At fourteen he journeyed to the University of Salamanca to pursue a higher course of ecclesiastical studies, consisting of philosophy, theology and canon and civil law. At the end of six years he took the degree of bachelor in both branches of law. In 1459 poverty and the advice of his father induced him to go to Rome, where he continued his studies and sup-

¹ "Life of Cardinal Ximenes," Hefele-Dalton. "Reign of Ferdinand and Isabella," William H. Prescott.

ported himself by the fees he obtained as consistorial advocate in the ecclesiastical courts. Shortly after he was recalled to Spain by the death of his father. His family was now reduced to the most straitened circumstances. To relieve their burden, Ximenes asked and obtained from the Pope "*litteræ expectativæ*," by which he was to receive the first vacant benefice in the Diocese of Toledo. The Protestant historian, Prescott, calls this granting of expectancies an assumption of the Papal court. True, the right of the Pope was widely controverted in Germany and in Spain during this period, but it was not till the subsequent legislation of the Council of Trent that the granting of these letters was altogether annulled. Hence the Pope in conferring and Ximenes in receiving them were acting justly on the ground of historical right. But Carillo, the Archbishop of Toledo, took umbrage when Ximenes claimed the benefice of Uzeda by virtue of the Papal letter. After argument had failed to dissuade Ximenes, the Archbishop imprisoned the inflexible claimant. He was kept in custody for six years, refusing to yield his right to his Archbishop. When Carillo finally saw the uselessness of trying to break the determination of Ximenes, he released him from prison and placed him in undisturbed possession of the benefice. After a short and uneventful stay at Uzeda, Ximenes exchanged this parish for the head-chaplainship of Sigüenza. Being a man of retirement and study, he devoted himself assiduously in his new station to the study of the Bible, acquiring, moreover, a knowledge of the Hebrew and Chaldaic languages. The priestly and natural virtues, which he could not conceal in his life at Sigüenza, quickly won for him the esteem of the people. In 1483 his Bishop, Mendoza, made him vicar general of Sigüenza and rewarded him with several benefices. These honors, however, made keener Ximenes' desire for a more contemplative life. The following year he threw down his dignities and retired as a novice into the newly founded convent of San Juan de los Reyes. This convent had been founded at Toledo by Ferdinand and Isabella in consequence of a vow and belonged to the Franciscans of the Strict Observance. Bees fly to the flowers, and many people were attracted to the confessional of Ximenes, eager to seek the strength of his advice and the sweetness of his consolation. Ximenes now begged his superiors to send him to some more isolated monastery. Yielding to his wishes, they transferred him to the convent of Our Lady of Castanar, a retired spot, situated in the midst of a forest not far from Toledo. In this retreat of nature he built with his own hands a small hut, where he spent the most pleasant and profitable days of his life, dividing his time between the study of the Scriptures and religious exercises. After three years his superiors, in accordance with the Franciscan

rule which provided frequent changes for its members, removed Ximenes to the monastery of Salzeda. In this station he was appointed prior of the monastery. While he continued to practice austerities at Salzeda the Christian world rejoiced over the conquest of the Moorish kingdom of Granada by the Spanish army of Ferdinand and Isabella. This event offered the occasion for Ximenes' entrance into the active world. His preparations in mortification and the study of the Sacred Scriptures were now to bear fruit.

With Granada the last stronghold of the Moors disappeared in Spain in 1492. Ferdinand and Isabella, according to their policy in occupying Moorish territory, raised the standard of the cross upon the newly conquered soil. While the terms of capitulation allowed the Moors to retain their mosques with the free exercise of their religion, the influx of Christian colonists and the hope of converting the Moors urged Isabella to establish an archbishopric in Granada. The Queen nominated her confessor, Fernando de Talavera, its Archbishop. Ximenes, by the advice of Cardinal Mendoza, his former Bishop at Siguenza, was recommended to the Queen as her future confessor and counsellor. The poor Franciscan of Salzeda was summoned to the court of Isabella in 1492. His austere and modest appearance made a profound impression on the most pompous court of Europe, and the Spaniards declared their Queen happy to have as her confessor one who "was equal in wisdom to St. Augustine, to St. Jerome in austerity and in zeal to St. Ambrose." Ximenes accepted this dignity only on condition that he should be allowed to reside at his monastery and appear at court only when summoned. Two years after this appointment he was elected provincial of the Franciscans of Castile. In this office he showed the sincere spirit of his monastic life. The frequent journeys which he had to make in the visitation of the monasteries of his province were performed on foot, and frequently he was seen begging his food on the way. The zealous Franciscan observed that a spirit of laxity had crept into many of the monasteries and that many of the monks no longer practiced penance and poverty according to the lofty ideals of St. Francis. His first efforts were made to restore the convents to their primitive rule. He encouraged the Queen when she sought advice of him on her project of effecting a reform and, according to Prescott, was entrusted with the execution of the Bull of Pope Alexander VI. for the reform of religious orders in Spain. Later, in his office as Archbishop, we shall see him extending his efforts of reform to all classes of his diocese, to the religious, clergy and laity. He was always the good shepherd of his flock, and history testifies that he did much to preserve Spain against the ravages of the Reformation.

On the death of Cardinal Mendoza, Archbishop of Toledo, Ximenes was nominated by Isabella (who had in her marriage with King Ferdinand reserved this right to herself) to the vacant See of Toledo. The Archbishop of Toledo, who was by his office Primate of Spain and Chancellor of Castile, held a position, next to the King's, the most influential in the kingdom. Prescott estimates his annual revenues at 80,000 ducats² in the beginning of the sixteenth century. His vassals were numerous. On Good Friday of the year 1495 Isabella, after making her confession to Ximenes, presented him with the Papal Bull announcing his elevation to the See of Toledo. Ximenes without affectation at first humbly declined. But when a fresh Papal Bull arrived after six months commanding him to accept the honor at once, he submitted in obedience. He was consecrated on the octave of the feast of St. Francis of Assisi, 1495, in the presence of the King and Queen. One of his later biographers relates a touching incident which occurred at the consecration and which would prove to skeptical minds that Ximenes had sincerely wished in the first instance to decline the proposed dignity. After the ceremonies, so his biographer relates the incident, Ximenes, according to custom, went forward to kiss the hands of Ferdinand and Isabella. In doing this he used these few but memorable words: "I am come to kiss the hands of your Majesties, not because they have raised me to the first See in Spain, but because I hope they will assist me in supporting the burden which they have placed upon my shoulders." Ximenes was then fifty-nine years old. He was now the highest dignitary of Spain, yet he remained a monk in spirit, and would have followed out in his episcopal life the strict letter of the Franciscan rule had not Pope Alexander VI. recommended to him a certain exterior decorum more befitting his episcopal dignity. Ximenes, in compliance with the wishes of the Holy Father, adopted the external magnificence of his predecessors, appearing in the splendid silks and furs that characterized the nobility of Spain. Yet beneath his rich attire he continued to wear close to his body the coarse garment of the Franciscan Order. His official life was surrounded with becoming splendor, but in private he remained as simple as ever, sleeping on the bare floor or on a plank, partaking of a sparing diet and waiting on his own needs as often as he could. His cares and labors grew heavier with his honors.

As Archbishop of Toledo, Ximenes had the income of a king, but his needs continued to be those of a monk. The great excess of his revenues was spent in a generous way for the advancement of learning and art, and for the social and religious betterment of Spain, "objects which have rarely failed to engage a large share of

² 80,000 ducats is equal to about \$720,000 in United States money.

the attention and resources of the higher Spanish clergy," says the Protestant Prescott. The most important works of Ximenes are his Complutensian³ Polyglot Bible and the foundation of the University of Alcala. The latter was the more extensive project and made possible the execution of the Polyglot. The most renowned university of Spain, prior to the foundation of Alcala, was that of Salamanca, which was known as the Athens of Spain. But Alcala soon entered the field of learning with Salamanca and acquired so great a standing among Spaniards that it was called by them the "eighth wonder of the world." This noble enterprise of Ximenes excited the deepest admiration of Francis I., King of France. On visiting the university some years after the death of Ximenes he paid its founder a glorious tribute: "Your Ximenes has executed more than I should have dared to conceive; he has done, with his single hand, what in France it has taken a long line of kings to accomplish." Ximenes had laid the foundation stone of the first building in the year 1500. Throughout he took a personal interest in the progress of the work. He was often seen on the ground with a rule in his hand, taking the measurements and stimulating the men by his example. His enterprise and executive ability became so well known that the people jocosely remarked that "the Church of Toledo never had a Bishop of greater *edification*, in every sense of the word, than Ximenes." Queen Isabella and Popes Alexander VI., Julius II. and Leo X. fostered this institution of learning by granting it many privileges.

On July 26, 1508, the university received its first students. According to the plans, the faculty was to consist of thirty-three professors and twelve chaplains. Within eight years of the laying of the corner-stone all the professorships were filled and nine new ones added, amounting in all to forty-two. Six were for theology, six for canon law, nine for philosophy, six for medicine and surgery, one for mathematics, four for rhetoric, six for grammar and four for Hebrew and Greek. The number of students soon reached 7,000. The annual revenues with which Ximenes endowed the university amounted to about 14,000 ducats; later, about the beginning of the seventeenth century, they had grown to 30,000 ducats. Ximenes did all that he could to acquire a learned staff of professors, and to stimulate the interest of the scholars he presided in person over their disputations. With the advantages and conveniences afforded by his new university the zealous Archbishop could at length command the means of carrying out his project of the Polyglot Bible. For many years he had realized the deficiencies of the existing Bible editions, and he knew how necessary it was for every theologian,

³ Complutum is the ancient name for the city of Alcala, where the work was executed.

as he himself expressed it, "to drink of that water which springeth up to eternal life at the fountainhead itself." He intended to collect in one work the six early versions or texts of the Bible. He sought to obtain many manuscripts of the Old and New Testaments, paying extravagant prices for some and obtaining others for use from the noted manuscript collectors of his time. Seven Hebrew manuscripts cost him 4,000 ducats. Among others who were eager to lend him the use of their valuable manuscripts was the learned Cardinal Lorenzo de Medici, the future Pope Leo X., who loaned him some of the Vatican manuscripts. The outlay needed for the entire work was immense, the total expense amounting to 50,000 ducats, or close to \$450,000 in United States money. This sum, if estimated at the value of money in the fifteenth century, says Dr. Hefele, could have been expended only by one who, like Ximenes, had a king's income but a monk's necessities. The task had been begun in 1502, but it was not till 1514 that the New Testament was completed. The Old Testament was finished four months before the death of Ximenes in 1517. At the price of extraordinary labor and determination the Archbishop of Toledo had been enabled to push this work to its successful completion before death overtook him. He had always been sensitive of the shortness of life, and more than once during the progress of the work he had told his scholars to make haste before they lost their patron or he his scholars.

Within a few years after his death six hundred copies of the Polyglot, each consisting of six folio volumes, had been sold at the small price of six and one-half ducats a copy. Ximenes had conceived his idea of extending the study of the Scriptures in 1502, while Martin Luther was learning his philosophy at the University of Erfurt; he completed his project in July, 1517, four months before Luther startled the world by his revolutionary theses. These facts do not show Luther to be the first great patron of the Bible. Though many faults may be found with Ximenes' Complutensian Polyglot, it will always be regarded as the execution of a grand and generous plan. Prescott justly remarks that this work is a "noble monument of piety, learning and munificence, which entitles its author to the gratitude of the whole Christian world." But in addition to this learned and scientific work, which was to benefit theologians, Ximenes also planned the publication and distribution of other minor but more popular books for the use of the laity. He saw the need of wholesome reading to counteract the harmful influence of unworthy literature which the newly invented press was scattering abroad. For this reason, as well as for the extension of piety and devotion among the Spanish people, he had several of the writings and lives of the saints printed in book form and distributed at his own expense.

This project also proved successful, for the people received these spiritual books with great eagerness.

The object of these foundations was reform. Ximenes "devoted the whole strength of his talents and commanding energies to the cause of Catholicity." But he further carried his reforms through the more ordinary channels of Church discipline. It is a well-substantiated fact that many of the Spanish clergy, especially the lower clergy, of the fifteenth century were touched by the same blight of idleness, riches and political ambitions that were destroying priestly zeal in the other European countries. But Ximenes, by several wise regulations and institutions, did much to restore all men and all things to the Christian ideal. He commanded all priests to explain the Gospel on Sundays and holy days of obligation, to teach the people the Creed, the essential articles of faith and the Commandments. He revived several Christian customs that had fallen into disuse and ordered that a record be kept of the moral status of the parishes of his archdiocese. Under his direction a number of useful and pious institutions were founded. He also established an institution for the protection of poor girls who were enticed to a life of sin through their poverty. He was the chief financial patron of a hospital that had been erected for poor widows and orphans, and when famine threatened to destroy this excellent foundation of mercy in the year 1505 Ximenes furnished it with more than 4,000 bushels of corn. He frequently visited the hospitals in person, fed poor people at his palace and released many from prison. Before his death he had established four hospitals, eight monasteries and twelve churches. As Archbishop of Toledo, Ximenes was, under the King of Spain, a temporal sovereign. He had under his domain fifteen large cities and a number of small towns and villages, with a vast retinue of vassals. He carried on the affairs of his dominion with that characteristic impartiality which marked the whole of his career as a statesman. As Archbishop of Toledo he was also Chancellor of Castile. In this office he tempered the abuses of Spanish taxation by abolishing the entire band of salaried tax-gatherers, substituting a system of direct taxation upon the people. Ximenes also took a part in the disputed succession of the kingdom of Castile that followed upon the death of Queen Isabella in 1504. The Infanta Joanna, upon whom the succession should have fallen, was incapable of taking the reins of government owing to the unbalanced state of her mind, and Charles, the grandson of Ferdinand and Isabella, was still in his minority. These exigencies had urged Isabella to nominate Ferdinand, her husband, Regent of Castile. But shortly after the Queen's death many of the Castilian nobles rose up against his rule, refusing even to heed the last wishes of Isabella. During these

trying times Ximenes was the trusted advisor and champion of the rights of Ferdinand. Twelve years later Ximenes himself was Regent of Castile. He was always sincerely and devotedly attached to the royal house, but never to the prejudice of his conscience. His life did not close with the regret of another great Cardinal of his time, "If I had only served my God as I have served my King."

In acknowledgment for his services to the State and to himself King Ferdinand before his death obtained for Ximenes the Cardinal's hat. He also appointed his favorite prelate Grand Inquisitor of Castile. To connect the name of Cardinal Ximenes with the Spanish Inquisition is to many minds a distinct stain upon his character. Before entering upon the character of Ximenes as Grand Inquisitor of Castile it may be necessary, therefore, to premise a few facts concerning the Spanish Inquisition. First, the ecclesiastics who sat on the tribunal did not condemn the culprits to death. The tribunal of the Inquisition was composed of a Grand Inquisitor, who was always either an Archbishop or a Bishop, and of eight ecclesiastical counsellors, six of whom belonged to the secular and two to the regular clergy. It was the duty of this tribunal simply to pass sentence upon a heretic, declare high excommunication against him if he was obstinate, and then hand him over to the secular power for punishment. Secondly, it is necessary to view the Inquisition in the light of the institutions and principles of the fifteenth and sixteenth centuries. For after a person was convicted on the strongest evidence of being an apostate heretic by the tribunal of the Inquisition we cannot blame that body if the laws of the time condemned him to capital punishment. The principle, "*cujus est regio, illius est religio*," was so clearly defined at this period that Protestants defended it and called it into use against the Catholic Church. Less than a century ago this maxim was enforced by Protestants in Sweden, when J. O. Nilson, for having embraced the Catholic religion, was banished from his native country and deprived of his civil and hereditary rights.⁴

If we review the character of Ximenes as Grand Inquisitor of Castile in the light of true history, with due regard for the times in which he lived, we shall find him to be the same noble person that he was as a priest, religious and Archbishop—just, firm and deeply religious. He restricted the power of the officers of the Inquisition, closely supervised their conduct and deprived of their office those who were inclined to abuse it. Shortly after his elevation to the dignity Ximenes introduced regulations that were intended to reduce the number of trials of the Inquisition. He ordered his priests to instruct converts against all actions that might make them liable

⁴ "Life of Cardinal Ximenes," Hefele-Dalton.

to the suspicions of the Inquisition. But neither his wisdom as statesman nor his justice as a man could make him believe that the Inquisition was an unjust institution. He was convinced that it was a tribunal of God, whose principles were to be upheld, though never its abuses. During his ten years as Inquisitor of Castile the comprehensive and zealous spirit of Ximenes was occupied in several other projects. He was in the midst of the work of the Polyglot and was assuming a considerable part in the affairs of the State. Though these labors might be considered large enough to engage the sole attention of many men, the Cardinal was preparing a new enterprise. This was the conquest of Oran, which was one of the strongholds of the Moors in Africa. The atrocities of the Moors in Africa, who carried their depredations even to the coasts of Spain, aroused the crusading heart of Ximenes. He induced King Ferdinand to fit out a force for an expedition against Oran. The Cardinal defrayed a large part of the expenditures out of his own revenues and agreed to lead the expedition in person, though he was already in his seventy-second year. An inscription placed in the Mozarabic chapel of the Cathedral of Toledo gives an epitome of the events of the conquest of Oran. We will translate it in part from the Latin text contained in Dr. Hefele: "In the year 1509 of the Christian era, in the sixth year of the pontificate of Julius II., during the regency of Ferdinand the Catholic, King of Aragon and the two Sicilies, the Reverend Father Francis Ximenes de Cisneros, Cardinal of Spain and Archbishop of Toledo, set sail from the port of Carthage with a great fleet of armed vessels, well supplied with cannon and provisions. On the 18th of May the fleet reached the port of Mazarquivir. After spending the night on board ship, the army on the following day disembarked and engaged with the enemy. The foe was beaten back from the outskirts of Oran and driven to the very gates of their city without loss to our forces. Those in the vanguard of the pursuit set their pikes up against the walls, scaled the embattlements and entered into the city. They raised the Christian standards upon the enemy fortifications and threw open the gates to their comrades who followed; 4000 of the enemy were slain. The city with its citadel was captured within four hours. Only thirty of our men fell by the favor of God, who in perfect Trinity liveth and reigneth for ever and ever. Amen."

Even a rapid sketch of the life of Cardinal Ximenes would be incomplete to the American reader without a short notice of his relations to the newly discovered America. When the news of the discovery of the New World reached Spain, Ximenes was confessor of Queen Isabella, and, though the ancient records are

silent about any participation of our humble religious in that event, we can surmise that he joined in the universal joy of Spain. Ximenes' solicitude for America was shown only at a later period. In the year 1500, as Archbishop of Toledo, he urged Ferdinand and Isabella to send a fresh band of missionaries to the Indians. In 1502, at his instigation, a number of excellent monks were sent across to evangelize the New World. But these first missions were never very successful. One of the great obstacles to the conversion of the Indians was the cruelties perpetrated by the Spanish colonists. By a system of repartimentos or distributions every Spaniard held a number of the natives as slaves over whom he might exercise rather absolute rights. With the death of Isabella, the indigenes lost their kind friend and protector; and the evils of oppression grew apace. In this deplorable state the Dominicans and other missionary priests became the benefactors of the Indians. Prescott admits that "they labored with unwearied courage for the conversion of the natives, and the vindication of their natural rights." The most ardent defender of the Indians was Las Casas. When the "protector of the Indians" came to Spain in 1515 to state his complaints against the oppressive treatment of the Spanish colonists, Ximenes was Regent of Castile. The Cardinal promised to adjust matters by the appointment of a commission of three Jeronimite monks, who were personally to investigate and report on the conditions of America. Ximenes appointed Las Casas protector of all the Indians and directed him to join the commission of Jeronimites to the New World. Before their departure a set of instructions were to be drawn up to act as the basis of the civilization and conversion of the Indians. The first act of the commissaries upon their arrival in America was to be the liberation of all Indians whose masters were not residents of America. Wherever the immediate liberation of slaves was not possible, Ximenes forbade slave-holders to overwork their subjects and made further provision whereby the natives as soon as they were considered capable of living as free subjects were to be emancipated. The Cardinal's instructions were moreover intended to advance the civilization of the Indians. They directed the commissaries to help the natives in building villages for themselves, to teach them the science of agriculture, which the monks of that period knew very well, and to introduce into Indian manners civilized habits of domestic life. But unfortunately for the success of the commission, Las Casas and the three Jeronimites did not agree in their policy of emancipating the Indians, "and the colonists were thrown into violent agitation." Las Casas returned to Spain in the middle of the seventeenth century, but Ximenes was already on his

death-bed, too weak to hear the grievances or representations of the Indians' protector.

The year 1517, that of his death, was a turbulent one for Cardinal Ximenes. The cares of state grew daily more burdensome. "Braved by the aristocracy at home, thwarted in every favorite measure by the Flemings abroad, with an injured, indignant people to control, and oppressed, moreover, by infirmities and years, even his stern, inflexible spirit could scarcely sustain him under a burden too grievous, in these circumstances, for any subject." His last days on earth were clouded by the cold ingratitude of his King, Charles V. Having completed his season of usefulness, Ximenes calmly awaited the day of his death. On the 8th of September, 1517, he died, with the words of the Psalmist on his lips: "In Thee, O Lord, have I hoped." His life had been a public benefaction to his country and his Church. Little more than a hundred years after his death, efforts were made by his countrymen for his canonization. Though Ximenes has never been officially recognized as a saint of the Catholic Church, many parts of Spain look upon and honor him as such. As late as the year 1857 the Spaniards gave a demonstration of the esteem in which they hold their illustrious Cardinal. On the 27th of April of that year, his remains were translated to Alcala, escorted by representatives of all classes of the Spanish nation. The hierarchy and clergy were present to do honor to his priestly virtues, civil authorities to acknowledge his statesmanship, military men his talents and courage as an army leader, rectors, professors and literary notabilities to offer their homage to the founder of the University of Alcala and the patron of the Polyglot Bible.

G. D. S.

THE CATHOLIC CHURCH AND THE GENTLE SCIENCE OF NUMBERS.

"The fourthe Seyence is called 'Ars Metrique.'" The Mirrour of the Worlde. (Caxton, chap. x.)

"**N**O SUBJECT, I am sure," writes an eminent British mathematician,¹ in his memorial of a lamented colleague, "loses more than mathematics by any attempt to dissociate it from its history." Comparatively few of us perhaps would be quite prepared to concur in this statement. Some, indeed, might be rather disposed roundly to assert its contrary, and maintain that no subject would suffer less by such dissociation. Since all mathematical truths persist by virtue of an inherent and absolute necessity, admitting no bias or personal equation, it might seem to matter little by whom they were enunciated. Two and two make four the world over, and always must, in every age and clime, for mathematical science deals with certainties. Its processes and conclusions are rigorously demonstrable. Its methods differ from those pursued in other sciences, in that they exclude all *moral* evidence. While appealing strictly to the reason, they do not teach man to weigh conflicting evidence, nor arrive at what is termed *moral* certainty by a summation of overwhelming probabilities. They neither appeal to nor train man's moral nature, and lacking the quick pulsations of this human element, the history of their development may seem to many a matter of cold indifference. Above all, it may be asked, how does their progress, in any way, touch the Church's life? True, the Church has always concerned herself with all that promotes man's highest welfare. Not theology only, but philosophy, history, literature, art; in short, the humanities have claimed and received her fostering care. To her, supremely, may be applied that saying of the Roman poet: "*Nihil humani mihi putavi alienum.*" Mathematics, however, may seem, at first view, to lie outside that sphere of moral influence in which the Church lives and works.

But let us scan the matter more closely. It cannot be denied that in its applied forms a knowledge of mathematics enters into almost every practical science and art of life. Engineering, architecture, hydrostatics, physics, and in the realm of art perspective and musical harmonics, all lie under heavy obligations to this so-styled abstract science. No ships could sail nor land surveys be made without its aid, while commerce would be sadly handicapped were we suddenly to be deprived of our modern numerals and thrown back upon

¹ J. W. L. Glaisher.

the "abacus" and "counters" of old Roman days. We see then, broadly speaking, that the mathematical progress of an age or nation gives no uncertain index of its general status in civilization. Again, it has sometimes been asserted by her traducers that the Church has promoted culture only in so far as it subserved her own purposes. Of music, painting and sculpture she might well be a liberal patron, since these arts served greatly to enhance the magnificence of her ritual. Philosophy she had used as the vehicle of her theological tenets, while certain forms of learning which enabled her to hold sway over the minds of men she had promoted; but that to the study of natural or abstract science, and especially such sciences as cultivated man's reasoning faculties and enabled him to think independently, she had preserved an attitude of "instinctive hostility." As mathematics claim preëminent rank among the latter class, it has been frankly assumed by many that their pursuit was all but wholly neglected during the Middle Ages, and that they have only come into their own within strictly modern times. May we not then, for a two-fold reason, examine into the facts of the case and, discarding preconceptions, seek to ascertain what mathematical work actually was accomplished during the centuries in which the Church was the supreme educator of Europe, and clearly determine her attitude toward them? The mathematical heritage bequeathed by pagan Rome to early Christian Europe was of the scantiest. Unlike the Greek, the Roman mind felt no interest in abstractions, and even for the most necessary and practical purposes of life his mathematical resources were extremely meagre. "In philosophy, poetry and art," writes Cajori,² "the Roman was an imitator, but in mathematics he did not even rise to the desire for imitation. The mathematical fruits of Greek genius lay before him untasted." The attainments of the Roman mathematician were limited to the strictly practical needs of reckoning for purposes of trade, the collection of taxes and interest and rudimentary land surveys. Reckoning, in a Roman school, was taught by means of the abacus, whose pebbles, or "calculi," have supplied us with the modern term to calculate. By its aid the elementary operations of addition and subtraction could be readily performed with certain limited ones in multiplication and division, rules for which may be found in sundry old works on arithmetic.³ For large numbers recourse was had to carefully prepared tables to facilitate the work. However rude and primitive such a mode of reckoning may appear to us, the use of the abacus offered certain distinct advantages to the then commercial world, providing a simple and concrete means by which the most illiterate could balance their ac-

² Cajori, "Hist. Mathematics," p. 77.

³ See R. Recorde's "Ground of Artes," pp. 225-262, London, 1610.

counts and merchants of various tongues carry on their barter. Its usefulness is attested by its all but universal employment among nations as widely separated as the Etruscans, Greeks, Hindoos and Chinese. Even to-day it survives in Russia, China and Japan, an expert Japanese abacist being able, it is said, to add numbers as rapidly as they are read to him.

Involved calculations in interest were avoided at Rome by its monthly collection at the rate of one "As" on each hundred borrowed, or, as we should say, 12 per cent. If the rate were higher, it was some multiple of 12, all Roman fractions being duodecimals. Land surveys were made in the days of the Republic by special officers, termed "gromatici," who used empirical formulæ, often mere approximations. Later, when greater accuracy was required, Greek geometers were pressed into the service. Thus when Julius Cæsar conceived the idea of a survey of the entire Empire (the first general survey ever made at Rome), he employed the Greek geometers, Theodotus, Zenodoxus and Polycletus. Early Christian scholars, then, naturally turned to Greek sources for mathematical instruction. Greece from the first, as Cardinal Newman tells us, had been the "preacher and missionary of letters throughout the whole Roman world;" forming the intellect not of Italy and her Western colonies only, but "charging the whole atmosphere of the East with Greek civilization."⁴ In mathematics four successive schools had arisen. Those of Ionia, Magna Grecia, Athens and Alexandria, the last of which was to exert a controlling influence over the mathematics of Christian Europe, directly and indirectly, down to the very threshold of modern times. "Numerous as were the centres of Hellenic learning spread over the civilized world two centuries before Christ," writes Laurie, "there is none which, after Athens itself, commands our attention so much as Alexandria; the great Alexander, in founding it, connected Europe, Asia and Africa not merely by mercantile bonds, but in their intellectual and literary life."⁵ In the days of the later Roman Empire Alexandria had become, indeed, both the commercial and intellectual emporium of the world. In its great museum or university, established by Ptolemy Lagus, about 300 B. C., the glories of Greek mathematics were revived, Euclid himself, according to Gow, having been summoned to direct their teaching. "To this haven," he adds, "every student resorted, and to Alexandria we owe whatever is best in the science of antiquity."⁶ The most eminent men were invited to fill its chairs, and round them congregated youths from every quarter of the civilized world.⁷ From

⁴ Newman, "Hist. Sketches," Vol. III., p. 90.

⁵ Laurie, "Rise and Early Constitution of Universities," p. 5.

⁶ Gow, "Hist. Greek Math," p. 194.

⁷ Laurie, p. 6.

this time forward almost all the mathematicians of the Empire belonged to the Alexandrine School. Here geometry was taught as developed from Pythagoras to Euclid; trigonometry as formulated from Hipparchus to Claudias Ptolemacus; conics were introduced by Apollonius of Perga; the "brilliant and practical Heron" anticipated the discoveries of modern mechanics in his "Mechanika" and "Baroukos,"⁸ and here about the time of the Christian era the science of numbers, the "Arithmetike" of the Greeks became the absorbing study and developed, in the hands of the Neo-Pythagoreans, into a quasi-religious cult. Among writers of this school we may note especially Nichomachus of Gerasa, whose arithmetic remained a standard text-book for one thousand years; Iamblichus, the commentator of Pythagoras, and Diophantus, the first real Greek algebraist. In the stimulating atmosphere of this great Alexandrine studium Christian students mingled with pagan. "In the museum, as also at Athens, were trained the fathers of the Church. Christian Bishops obtained all the instruction and shared all the learning of their time, being, however, always on their guard against its hurtful influences."⁹ This fact of the attendance of Christians at the public schools of the Empire until their close by Justinian is attested by numerous passages from the fathers, both by those who justify and those who condemn the practices, but more pertinently as regards our subject by the educational influence exerted by these Alexandrine mathematicians throughout the Middle Ages, which can be traced more or less distinctly even through their darkest portions.

The "Quadrivium," under which the higher studies of mediæval schools were grouped, owed its origin to Pythagoras, who found the essence of all things in numbers (including magnitudes), subdivided as numbers absolute, or arithmetic, numbers applied, or music; magnitudes absolute, or geometry, magnitudes in motion or astronomy. So we see that, however absorbing the study of philosophy afterwards became, the original basis of mediæval education was mathematical.¹⁰

Despite the brilliancy of Greek mathematics, however, and their vigorous retention of life, they suffered from one fatal defect, the lack of any adequate system of notation. Without this, progress in what we understand by arithmetic becomes impossible. The Greeks, however, understood by it only an abstract science of numbers. They despised "reckoning," for which they reserved the word "logistike." Pythagoras boasted that he "had raised arithmetic above the needs of merchants," and it may be to this aristocratic prejudice against

⁸ Gow, p. 277.

⁹ Laurie, p. 6, p. 25.

¹⁰ Gow, p. 72 n. Turner, "Hist. Philosophy," p. 243.

any possible infiltration of the commercial into the "Divine Science of Numbers" that Greek mathematics owed their greatest deficiency. Certainly in the matter of notation they fell far below the Romans, whose system at least enabled them to represent numbers up to a million by the use of seven letters only, and possessed a distinct advantage in its "subtractive principle," not found in other old notations. The Greeks, on the contrary, exhausted their entire alphabet (reintroducing three obsolete letters) to express numbers from 1 to 1000, and then began the process afresh, with a series of accented letters and most confusing results. We can easily understand how such a numerical system must have complicated the simplest processes of arithmetic and rendered the multiplication and division of large numbers all but impossible, and so Greek mathematicians found these processes to be. There are, however, striking exceptions. Several instances occur in which some of their more noted arithmeticians grasped results apparently unattainable with the means at hand. This fact, coupled with obscure allusions to a seemingly esoteric system of calculation occasionally employed, has led more than one modern investigator to suspect that the Alexandrine Greeks had to some extent become acquainted with the principles of Hindu notation—a theory to which we will have occasion to revert later.¹¹ With the clumsy system in general use, however, mathematicians were as men seeking to create a literature without an alphabet, so that it became the first duty of early mathematical Europe to supply that great desideratum, an adequate numerical notation. The need might have been met much sooner had East and West remained united. But, unfortunately, with the conversion of Rome, her political decline had begun. Before the advancing waves of barbarian invasion the Roman eagles were driven backward. The one hundred and fifty years of peace which, as Newman¹² so beautifully expresses it, the Prince of Peace brought with Him to dower the Roman world had passed and a fearful era of blood and flame, desolation and carnage ensued. Amid this social chaos a general depression of learning was inevitable, and in this depression the mathematical world shared. Yet the darkness was not total.

In 476 A. D. the Western Empire passed away. Soon after Italy was conquered by the Ostrogoth, Theodoric. "It is remarkable," writes Cajori,¹³ "that this very period of political humiliation should be the one in which Greek science was most zealously studied in Italy." Text-books began to be compiled from Greek authors, which

¹¹ (Gow, in his "History of Greek Mathematics," gives much interesting information in relation to this point.) [See pp. 57-63, p. 107.]

¹² Newman, "Hist. Sketches," Vol. III., p. 118.

¹³ Cajori, "Hist. Math.," p. 81.

continued to be the classics of Europe down to the twelfth century, for Theodoric, though a Goth, was a patron of letters. A sort of sunset glory irradiates his reign. Libri writes of it: "Nous voyous du temps de Theodoric des lettres reprendre une nouvelle vie en Italie; les écoles florissantes, les savans honorés, et certes, les ouvrages de Boëce, de Cassidore, et de Symmaque surpassent de beaucoup toutes les productions des siècles précédants."¹⁴ Of the three scholars who adorned the court of Theodoric, Boethius stood preëminent, the last of the Romans whom, Gibbon tells us, "Cato or Tully would have acknowledged as their countryman,"¹⁵ the "founder of scholasticism," as he has been termed from his revival of the study of the Trivium and Quadrivium. Anicus Manlius Severinus Boethius was born at Rome about 475 A. D. of the distinguished family of the Anicii, which had become Christian some time before his birth. Early left an orphan, he is said to have been educated at Athens. He married the daughter of the Senator Symmachus and was himself made Consul in 510 A. D. Although long a favorite with Theodoric, his unswerving rectitude and exposure of iniquity made him enemies at court; he was disgraced, imprisoned and executed with details of horrible cruelty. Modern critics have sometimes thrown doubt upon the Christian faith of Boethius, but to the mediæval mind no such doubts existed. To them he was ever "Divus Boethius," the Christian philosopher and scholar; while the atrocious circumstances of his death won him from some the aureole of martyrdom. Thus Dante, speaking of his tomb in the monastery of S. Pietro in Ciel d'Oro, at Pavia, writes:

"The saintly soul that shows
The world's deceitfulness to all who hear him,
Is with the sight of all that good is,
Blest there; the limbs from whence it was driven, lie
Down in Ciel d'Auro; and from martyrdom
And exile came it here."—Paradiso, Canto X.

To Boethius, as mathematician, we owe an *Institutis Arithmetica*, which is essentially a translation of the arithmetic of Nichomachus and a geometry in several books. His friend, Cassiodorus, writes glowingly in their praise: "Through your translations the music of Pythagoras and the astronomy of Ptolemy are read by those of Italy; the arithmetic of Nichomachus and the geometry of Euclid are known to those of the West."¹⁶ A special importance attaches to these translations of Boethius, not only from their extensive use

¹⁴ Libri, "Hist. Math." Vol. I., p. 78.

¹⁵ Gibbon, "Rome," ch. 39.

¹⁶ Smith and Karpinski, "Hindu-Arabic Numbers," p. 72.

throughout the Middle Ages, but because upon our acceptance or rejection of a celebrated passage in his geometry depends our answer to the momentous question: Who introduced our so-called "Arabic numbers" into Europe? We now know our "Arabic" notation to be of Hindu origin. Nevertheless, the very term "Arabic" is indicative of what has been in fact the common assumption that these numbers were first made known to Europeans by the Arabs of Spain. It has often been represented that the Christians of Europe till the time of the Crusades at least were plunged in a night of impenetrable darkness, from which they were largely released by the superior enlightenment of the Spanish Moors, who bestowed upon them not only the boon of the Hindu-Arabic numbers, but that of algebra, of trigonometry and of Ptolemaic astronomy as well, and introduced them to the study of Greek authors in general. Until recently it was impossible to bring clear evidence against so sweeping an assertion. Now, without at all denying a very real debt owed by Christian scholars to the culture of the Spanish Arabs, it has become quite possible to point out other channels through which Greek letters and science both could and undoubtedly did reach Europe.¹⁷

Turning now to the famous passage in Boethius' geometry, we find it consists in the description of an abacus which he attributes to Pythagoras, in which pebbles are discarded and the nine digits, with place values, substituted. The zero is not used, but instead the abacus is divided into columns, marked respectively S. (singularis), or M. (monas), D. (decem), C. (centum), etc. The numerals introduced are called "notæ," or "characteres," and are written upon "apices" (small cone-shaped bases¹⁸), a column being left vacant where we would introduce a zero. Cajori describes these characters as "obviously the parents of our modern Arabic numbers." By their means, with the retention of the abacus, numbers could be written and arithmetical operations performed precisely as we perform them today, only discarding the abacus and introducing the zero. The Neo-Pythagoreans were fond of asserting that their founder had visited India and brought thence much rare and occult mathematical knowledge, but as no clear evidence of such a visit can be found, and as the Hindus themselves are not supposed to have possessed their decimal notation as early as the time of Pythagoras, the attribution of Boethius can only be accepted as applying to the Pythagorean school in general, which we know was prominent at Alexandria. Through the gateway of Alexandria, where Greek and Oriental culture clasped hands, either by scholars or by Eastern merchants, who for centuries had carried on an extensive traffic between India and

¹⁷ Smith and Karpinski, chap. v-vii.

¹⁸ Cajori, p. 82; p. 122; Smith and Karpinski, p. 117.

the West, many authorities believe Hindu numerals to have been introduced into Italy at an early date, before the Hindus themselves had adapted the zero.¹⁹ During the palmy days of the undivided empire communication had been extensive and continuous. Throughout the vast extent of the Roman world a network of roads formed a highway for merchant and soldier alike. From Britain to the mouth of the Ganges these great white highways extended, crossed by innumerable caravans.²⁰

"Over one hundred and twenty ships leave yearly for India," writes Tucker in his "Life in the Roman World of Nero and St. Paul," "for Alexandria is the greatest depot for trade around the Indian Ocean." The intercourse which pagan Rome had established for material greatness Christian Rome continued to promote for spiritual and intellectual purposes. Such intercourse implies an exchange of knowledge and ideas; and to the question, "Could Boethius have known the Hindu numerals?" Smith and Karpinski answer promptly: "In view of the relations that will be shown to have existed between the East and West, there can only be an affirmative answer to this question. The numerals had existed for several centuries *without the zero*; for several centuries they had been well known in India; there had been a continued interchange of thought between the East and West; warriors, ambassadors, scholars and the restless trader all had gone back and forth between the Mediterranean lands and the centres of Indian commerce and culture; Boethius could very well have learned one or more forms of Hindu numerals."²¹ This "Boethius frage," as it is called, is no new question, although until recently confined to a small circle of scholars. It has been hotly contested, since its solution will determine whether to Christian Greek or Mohammedan Arab Europe owes the great debt of her present notation. As far back as 1727 the two Weidlers wrote in favor of the Greek theory."²² In 1845 Baron Von Humboldt wrote: "The profound and important historical investigations to which a distinguished mathematician, M. Chasles, was led by his interpretation of the so-called Pythagorean table in the geometry of Boethius render it more than probable that the Christians in the West were acquainted, even earlier than the Arabians, with the Indian system of numeration."²³ At present, although not universally accepted, the theory comes to us supported by such authorities as Chasles, Cantor, Montucla, Libri, Martin, Truetlein, and, above all, of Woepeke, the German orientalist and mathematician, who

¹⁹ Cajori, p. 106, p. 126.

²⁰ Keith Johnston, "Hist. Geo." p. 26. Tucker, p. 26.

²¹ Smith and Karpinski, pp. 73-79.

²² "De characteribus numerorum vulgaribus," Wittenberg, 1727.

²³ Cosmas, Vol. II., p. 226.

made a life study of this and kindred subjects.²⁴ After the sixth century mathematical activity died out in Italy and the pregnant passage in Boethius was destined to remain without fruit for three centuries, when Gerbert arose, the young monk of Aurillac, the future Pope, Sylvester II., and the master-mind of his age. By his great erudition and phenomenal activity he infused new life into the study of mathematics, and to him we owe their revival in the age of the Othos.

"In the tenth century," writes Cajori, "Gerbert was the central figure among the learned, and the zeal with which the study of mathematics was now taken up by the monks was due to his energy and influence."²⁵ Born in Auvergne, of humble parents, he early entered the monastery of Aurillac and studied under Raimond, pupil of Odo of Cluny. About 967 he visited Spain, being commended to the care of Bishop Hatto, of the province of Barcelona, then entirely under Christian rule. Legend was long busy with Gerbert's life. In the days when, as De Maistre writes, "history seemed a conspiracy against truth," many fables were written of him which the publication of his "Letters" in the seventeenth century,²⁶ and later of his "Life," by Richer, have finally dissipated. Richer was a monk of St. Remi and a pupil of Gerbert. When the great teacher became Archbishop of Rheims he requested Richer to write a life of his times. The work lay in manuscript at Bamberg, entirely forgotten, until Pertz discovered and published it in 1833.²⁷

Contrary to the frequent assumption that Gerbert obtained his mathematical knowledge from the Moors, these two authentic sources allude only to Christian influences. Had he studied at any Moorish school, he would, by a decree of the Emir Hisham (787-822), have been obliged to know Arabic, a study which would have absorbed much of the three years spent in Spain and of which he gives not the slightest hint. Instead he speaks often of his study of Boethius, as in his letter to Adalberon, Bishop of Utrecht (Epistle 8th). Immediately after his visit to Spain, Gerbert went to Rome to teach mathematics. From Mantua he procured a copy of Boethius' geometry, on which he commented and wrote. Of these labors his disciple, Bernelinus, gives us a description in his work on the abacus.²⁸

²⁴ Chasles, "Apercu historique sur l'origine et le developement des Methodes en Geometrie." Cantor, "Gesichte der Math. und Math Beiträge." Montucla, "Hist. Math." Libri, ditto. Martin, "Les Signes numeraux du Moyen Age." Treutlein, "Das Rechnen im 16 Yahrhundert." Woepeke, "Propagation des Chiffres indiens, Journal Asiatique," Vol. I., p. 34 [1863]. Introduction au Calcul Gobari, Atti dell'Accademia pontificia dei Nuovi Lincei, Vol. XIX.

²⁵ Cajori: p. 120, 124.

²⁶ First published by Masson and Duchesne; Picavet, "Vie de Gerbert."

²⁷ Pertz; "Monumenta Ger. Hist." Vol. III.

²⁸ Reprinted in Olleris edition of Gerbert's Works, pp. 311-326.

In none of his letters does Gerbert speak of the Moors or of Arab numerals, though he writes once to a certain "Joseph the Wise" (probably a converted Jew) to "enquire concerning his method of division." "It is argued by some," writes Cajori, "that Gerbert got his apices and his arithmetical knowledge, not from Boethius, but from the Arabs of Spain, and that part or the whole of the geometry of Boethius is a forgery, dating from the time of Gerbert." If this were the case, then the writings of Gerbert would betray Arabic sources, as do those of John of Seville; but no points of resemblance are found. Gerbert could not have learned from the Arabs the use of the abacus, because all the evidence we have goes to show they did not employ it. Nor is it probable that he borrowed from them the apices, because they were never used in Europe except on the abacus; hence it seems probable that the abacus and apices were borrowed from the same source. The contrast between authors like John of Seville, drawing from Arabic works and the abacists, consist in this, that, unlike the latter, the former mention the Hindoos, use the term "algorism," calculate with the zero, and do not employ the abacus. The former teach the extraction of roots; the abacists do not—they teach the sexagesimal fractions used by the Arabs, while the abacists employ the duodecimals of the Romans."²⁹ A little over a century after Gerbert's death, many Christian scholars did go, as we shall see, to study mathematics amongst the Moors, but those who maintain that Gerbert drew from the same source must explain why, from their time on, two distinct schools should have existed in Europe with contrasting usages and bearing the distinct names of "abacists" and "algorists." It is sometimes said, in disparagement of Gerbert, as if to prove he did not appreciate his mathematical heritage, wherever received, that he and his pupils often substituted Roman numerals for the Boethian apices, and so they did, but with a difference. Suppose, for example, it were required to multiply 525 by 630. These numbers, expressed in Roman numerals and according to *Roman custom* would read DXXV multiplied by DCXXX (and some of us might be perplexed how to proceed further); Gerbert would write them on his abacus thus:

e	d	s
V	II	V
VI	III	

an expression which showed at once the principle of place-values, and could be readily multiplied. Those of us who have been led to delve amid the musty tomes wherein mediæval mathematics lie

²⁹ Cajori, p. 126, but drawn from Cantor.

buried and have seen the widely variant and curious hieroglyphs which did duty for "Arabic numbers" until high up to the invention of printing, will be the last to blame the great teacher of the Iron Age for using familiar symbols while explaining new methods. Before turning to examine the labors of the "algorists," we cannot forbear mention of one other witness to the early existence of the Hindu numerals in Europe. In the Albeda cloister, near Longróno in Spain, is a copy of the "*Origines of St. Isidore of Seville*,"³⁰ the third book of which is taken up with the study of the *Quadrivium*. Here the nine Boethian characters appear, without the zero. They can hardly be said to be due to Moorish influence, for the Moors used the zero. Their appearance tends therefore to confirm Woepeke's theory that the Arabs found the Hindu numbers in Spain, but later introduced the more perfect form they had received from their Eastern brethren of Bagdad. We now turn to the survey of the algorist school, which obtained its mathematical knowledge avowedly from Arabic sources. Even here we may note two points not always clearly presented in works which eulogize the Moor as the instructor of Christian Europe. First, that the Christian sought to gain at great inconvenience and often peril to himself what the Moor was chary of imparting to the despised "giaour," and secondly, that the latter was simply the custodian, never the originator of the science he had to impart. From 1130 to 1180 four Englishmen are known to have journeyed to Spain to study mathematics. But as we have seen, no one not already familiar with Arabic could be received in any Moorish school. The earliest of our travelers, a monk, Adelard of Bath, who traveled in Asia, Egypt and Spain, tells us he was obliged to disguise himself as a Mohammedan student and "brave a thousand dangers" to obtain the coveted learning. His companions and successors, Robert of Chester, William Shelley and Daniel Morley, resorted to similar disguises. To Adelard is due the earliest known translation of Euclid from the Arabic,³¹ while the algorism or arithmetic of Al Khowarezmi, an Arab of the Eastern or Bagdad caliphate, discovered at Cambridge in 1857, is either from his hand or that of Robert of Chester. About this time an Italian scholar, Plato of Tivoli, adventured equal perils to enter the schools of Cordova, while at Toledo we find a band of Christian scholars under the leadership of Raymond, Archbishop of that city, busily engaged in translating and compiling from Arab sources. Prominent among them was John of Seville, known also as John de Luna, and Johannes Hispalensis. Originally a Jewish rabbi, he was converted to the faith and rendered eminent service to the

³⁰ "*Codex Virgillanus*," Smith and Karpinski: p. 138.

³¹ Cantor believes there was an earlier one.

Church of his adoption. It may be noted here that indications exist of an extensive debt owed in scientific and mathematical lines to the numerous and distinguished Hebrew converts of this era in Southern Europe. In Spain especially, their nationality enabled them to act as mediators between Christian and Moor, the Jewish rabbis winning protection from the latter for their medical skill, while the claims of the Spanish Jews to mathematical lore are by no means slight.³² These combined facts may serve to account for the singular interchange of the titles of physician and algebraist. The reader may recall that in "Don Quixote," when Samson Carasco is thrown from his horse, an "algebrista" is summoned to set the broken bones. The "Liber Algorismi" of John of Seville, found later in the Bibliotheque National at Paris, is interesting as containing the first hint as to the use of decimal fractions in its addition of ciphers for the extraction of square roots. A fellow-worker was Gerard of Cremona, whose treatise on algorism still exists in the Bodleian, and who threw himself with such ardor into the work of rendering Greek mathematics from the Arabic that his translations are said to number seventy in all.

Another eminent translator was Abraham Ben Ezra (the original of Browning's Rabbi Ben Ezra), who, though devoted to the spiritual interests of his own people, yet kept in scientific touch with Christian workers, dying at Rome in 1167. His work on Hindu arithmetic, introducing the zero, did much for the spread of the new notation. We are most of us familiar with the illustrious group of scholars gathered around Alfonso the Wise, in the thirteenth century, the mathematical tables of the astronomer king being all computed according to the new methods. We can find, however, some early examples of algorism outside of Spain, as the German Algorismus of 1143, now in the Hof Bibliothek, Vienna. It is bound with a "Computus" of the same date and by the same mediæval hand.³³ The earliest known example of the kind in France is the arithmetic of Raoul, or Randulph, of Laon, brother of the theologian Anselm of Laon³⁴ (1030-1117). It is a parchment of seventy-seven leaves and contains a "curious mixture of Roman and gobâr (Spanish-Arabic) numerals," including the zero. By the close of the twelfth century Europe was in possession of the so-called Arabic notation, as well as a large amount of other mathematical material.³⁵ Hindu methods of computation began to supersede the cumbrous ones inherited from Rome and to become the common property of all classes. This is

³² Jewish Ency. Art., Mathematics; as to converts, see Picavet's Gerbert. Cantor's Gesichte, Vol. I, p. 301-312.

³³ Alfred Nagl, "Zeitschrift für Math. und Physik," Vol. 34, p. 129.

³⁴ Alfred Nagl, "Aphandlungen zur Gesichte der Math.," Vol. V, p. 35.

³⁵ Cajori, p. 127-128.

seen from allusions in the literature of the day. Thus Chaucer writes of the clerk in the "Miller's Tale":

"His Almageste and bokes grete and smale,
His astralabie, longinge for his art,
His augrim (i. e., algorism) stones layen faire apart,
On shelves couched at his beddes head."

Thomas Usk in his "Testament of Love" tells us: "A sypher in augrim have no might in signification of itselfe, yet it yeveth power in signification to other." While Gautier de Coincy, in some lines on the miracles of our Lady, says:

"A horned beast, a sheep, an Algorismus ciper,
Is a priest who, on such a feastday, does not celebrate the holy
Mother."

A master mind was needed to digest the mass of material now available, and to place the mathematical inheritance of Europe on a firm basis. Such a one was forthcoming in the person of Leonardo da Pisa, otherwise known as Leonardo Fibonacci. "The traveler of today may cross the Via Fibonacci on his way to the Campo Santo and see at the end of the long corridor, across the quadrangle, the statue of Leonardo in scholar's garb. Few towns have honored a mathematician more, and few mathematicians have so distinctly honored their birthplace."³⁶ Before entering upon Leonardo's career, however, we will pause for a momentary survey of Arabian science, that we may understand quite clearly how this people came to act as the middlemen of Europe in transmitting the intellectual wealth of Greece and India. Up to the time of Mohammed's flight from Mecca the Arabs had been unlettered nomads. The next century was one of Moslem conquest. With amazing rapidity, Syria, Mesopotamia, Persia and even distant India fell under Saracen sway. Northern Africa was conquered and nearly the whole of Spain, until further progress westward was checked by the strong hand of Charles Martel, in 732. Not only for conquest, but for culture, was their triumphal march remarkable. With the reign of the Abbasides at Bagdad, a new period in the history of learning began. According to their own tradition, the scientific knowledge of the Arabs was first derived from the Greek physicians who attended the Caliphs at Bagdad.³⁷ The Greek Christians still possessed schools in Syria, those of Antioch, Emësa and Edessa being the most famous. From these centers scholars were summoned to Bagdad, and the work of Greek translation began. Medicine was the first subject

³⁶ Smith and Karpinski: p. 128.

³⁷ Ball, "Hist. Math.," pp. 144-145.

studied, but under the Caliphs Al Mansur and Haroun Al Raschid a species of court school was formed, analogous to that of Charlemagne, so nearly their contemporary in the West. Euclid, Aristotle, Ptolemy and other Greek authors were attacked. A little later (813-833) a large number of MSS. were secured from Constantinople, until, by the close of the ninth century, the most important medical, philosophical and mathematical works of Greece had come into the possession of the Arabs. Between Arabia and Hindoostan commercial relations had long existed. But a definite date is afforded for the introduction of Hindu numbers by the advent of a Hindu astronomer at the court of the Caliph Al Mansur, in the year 772 A. D., bringing with him the mathematical tables of the Siddhanta, the great Indian treatise on astronomy. These tables were translated into Arabic and with them a knowledge of Hindu notation was introduced among the Saracens, the Arabs having had no numbers before the time of Mohammed. This definite adoption of the decimal system was followed by a rapid development of mathematical activity. The first, and perhaps the greatest, of Arab mathematicians was Mohammed ibn Musa Al Khowarizmi, secretary and librarian of the Caliph Al Mamun. From the corruption of his name the mediæval term "Algorism," signifying computation, was derived. The Cambridge translation of his arithmetic opens with the words "dixit Algoritmi." From his algebra, which bears the title "Al Shebra W'al Mukabala," meaning "reduction" and "restoration," our word "algebra" is derived, though it was long supposed to be derived from the name of a later Moorish writer, Al Gabir, or Al Geber, who, however, was rather an astronomer than an algebraist. These two works of Al Khowarizmi were the most important of original Arabian writings in their influence on European mathematics, the arithmetic introducing Hindoo methods, the algebra a blending of Hindoo with Greek. We need only note farther that almost all Arab mathematicians belonged to the Eastern Caliphate, which was nearer their teacher than were the Moors.

The Arabs of the Western Caliphate assimilated, in turn, but produced few original mathematicians besides the Al Geber mentioned. Returning now to Leonardo of Pisa, we find he obtained his knowledge of Hindu computation from still other sources. Leonardo was neither monk nor churchman, but the son of a Pisan merchant, in charge of one of the numerous commercial dépôts established by his enterprising townsmen on the African coast of the Mediterranean. Here the young Leonardo was educated and, evincing a strong taste for mathematics, was sent while still a youth to enquire into the various systems of notation in use in the

great centres of trade. He traveled through Egypt, Syria, Greece and Sicily, and found the Hindoo to be, of all numerical systems, unquestionably the best. This was about the year 1200. The young mathematician had been born at a stirring time, in the very zenith of the early prosperity of his native town, for very early Pisa had risen to commercial renown and had stood in close relations with the East. In 1063 the city had fought a great battle with the Saracens at Palermo, capturing six treasure ships laden with spoils for the building of its Cathedral. Some years later she founded a merchant colony at Constantinople, while in 1114, an old writer tells us, "many heathen folk, Turks, Libyans, Parthians and Chaldeans, were to be found in Pisa." Amid such cosmopolitan surroundings we cannot wonder at Leonardo's rapid development. In 1202 he published his great work, generally known as the "*Liber Abaci*," which, however, included an independent investigation of all the better methods of calculation then known, and which continued to be for several centuries a storehouse whence authors drew material for works on arithmetic and algebra. Contemporary with Leonardo appeared in Germany the Dominican monk, Jordanus Nemorarius, elected General of his Order in 1222, who ranked second only to Leonardo himself in mathematical ability, his special contribution to arithmetic being his *Algorithmus Demonstratus*. (It was he who personally conducted the young Thomas Aquinas to Albertus Magnus at Cologne.) Works on arithmetic now began to multiply. The *Carmen de Algorismus*, by Alexander de Villa Dei, a minorite friar, was written in verse about 1240. The large number of manuscript copies of this work still extant bear witness to its wide diffusion. The *Algorithmus* of Sacrobosco, who taught at the University of Paris between 1230-1240, being perhaps the first to lecture on Algorism and algebra, enjoyed an even greater popularity. Its wide use in universities is attested not only by the number of surviving MSS., but by the fact that many of these are evidently short-hand copies by students for their personal use.³⁸ It is to Sacrobosco that the unfortunate misnomer of "Arabic" for "Hindu" numerals is due, the very popularity of his work tending to perpetuate the error. The mathematical writers of Southern Europe and even Sacrobosco's own commentator, Peter of Dacia, were fully aware of their Indian origin, as the title pages of many old arithmetics show. Peter of Dacia wrote his commentary on Sacrobosco in 1291. The Italian treatise by Jacobus of Florence appeared in 1307, followed by that of Giovanni di Danti di Arezzo in 1370. These are interesting, as

³⁸ Smith and Karpinski: *Hindu Numerals*: p. 59, p. 134. Max. Curtze found 45 copies in libraries of Venice, Munich, and Erfurt; 1 in Columbia, N. Y. C. *Am. Math. Monthly*, Vol. 17, pp. 108-113.

confirming a statement by Peacock³⁹ as to the superiority of the Tuscans, and especially the Florentines, in practical arithmetic and bookkeeping, so necessary for a commercial people. To the Florentines we are indebted for the formal introduction into works on arithmetic of "single and double Rule of 3; loss and gain; fellowship; exchange; simple and compound interest; discount, etc.:" Somewhat quaintly they reduced the fundamental operations of arithmetic to seven, "in reverence for the seven gifts of the Holy Ghost." We find now a monk of the Greek school, Maximus Planudes, whose arithmetic was based on that of Diophantus. The Byzantine school had never wholly died out, but can be traced back through a number of mediocre writers, as Hero the Younger, who wrote on geodesy and mechanics about 900 A. D. Psellus, who produced his "*Compendium Mathematicum*" about 1020, and others, the important point being that Planudes, if not all of his school, were familiar with the Hindu numerals⁴⁰ and instrumental in promoting their use throughout Greece. Planudes was followed by Barlaam, a Calabrian monk, whom even Ball concedes to have been a man "of great intelligence." His "*Logistic*"⁴¹ throws considerable light on the Greek treatment of fractions. He acted as ambassador to the Papal court at Avignon, and it was to him that Petrarch owed his knowledge of Greek. A third writer of the same school was the Greek monk Isaac Aegyrius, whose mathematical works, still extant, cover a wide field. His arithmetic, based on that of Nichomachus, is in the National Library at Paris. Professor Ball, though by no means favorable to the Church, mentions a direct ecclesiastical contribution to the spread of the new numbers, about this time. "The rapid spread," he says, "of the Arabic numbers and arithmetic through the rest of Europe seems to have been as largely due to the makers of almanacs and calendars as to merchants and men of science. These calendars had a wide circulation in mediæval times. Some of them were composed with special reference to ecclesiastical purposes and contained the dates of the different festivals and fasts of the Church . . . nearly every monastery and church possessed one of these . . . It was the fashion to use Arabic symbols in ecclesiastical works . . . and there are but few specimens of calendars after the year 1300 in which an explanation of the Arabic numbers is not included."⁴²

About this time, alas, Nicholas Oresme, Bishop of Lisieux, was inventing a notation of fractional powers.⁴³ A little later, Thomas

³⁹ Peacock: *Ency. Pure Math.*; art. *Arithmetic* (1847).

⁴⁰ Cajori: p. 135. Ball, "*Hist. Math.*," p. 117u.

⁴¹ *Cath. Ency. Art.* Barlaam.

⁴² Ball, "*Hist. Math.*," p. 186.

⁴³ Cajori, p. 134.

Bradwardine, Archbishop of Canterbury, dealt with the infinite and infinitesimal in his "Arithmetica Speculativa," while, on the practical side, Jehan Certain's "Kadran des Marchands" was becoming extremely popular in France and Spain. One of the earliest printed arithmetics was that by Calandri, published in 1491. Its title page bears a representation of Pythagoras with the Hindu numerals before him.⁴⁴ This work was closely followed by the "Summa de Arithmetica, Geometria, Propozioni, e Proporzionalita," of the Franciscan monk Lucas Pacioli. Works on arithmetic, however, were far from exhausting the mathematical activity of this period. Algebra, geometry and trigonometry were largely dealt with. The Liber Abaci of Leonardo Fibonacci had concerned itself as much with algebra as with its titular subject, while his brilliant solution of algebraic problems at the scientific tournaments inaugurated at Pisa by the Emperor Frederic II, in 1125, served to lend prestige to the subject and call general attention to it. The beginning of algebraic study, however, considerably antedated Leonardo's time. We may trace them back to the days of Bede and Alcuin. Being based on classic works, the study of algebra was in fact at this time in a more advanced state than its sister science of numbers. There is a collection of "Problems for quickening the youthful mind" (Propositiones ad acuendos Juvenes) which Cantor attributes to Alcuin. These knotty problems read surprisingly like those of our own school days. There is the problem of the dog chasing the rabbit, which has a start of one hundred and fifty feet. The cistern problem, where the time is given in which several pipes can fill a cistern singly; required the time in which they will do so conjointly. There is the problem of the distribution of one hundred bushels of corn among one hundred people in such a way that each man shall receive three bushels, each woman two and each child one-half bushel; required their respective numbers.

Other problems clearly show a Roman origin, while many are identical with those in the so-called Palatine Anthology, a collection of algebraic propositions, composed, or compiled (for some of them date back to Euclid), in the year 310 by one Metrodorus, an officer at the court of Constantine, with whom some of us are better acquainted through his correspondence with that emperor on the persecution of the Christians in Persia than through his mathematical works. The derivation of Alcuin's work from the earlier one is so evident that we can only suppose the latter to have been collected from Latin translations which had been used in Roman schools, more or less continuously from the time of Boethius on.⁴⁵ After Leonardo,

⁴⁴ Smith: "Rara Arithmetica," p. 46.

⁴⁵ Cajori: pp. 119-120. Ball: p. 102, p. 135.

however, algebra was established on a much more scientific basis. Gerard of Cremona had translated the algebra of Al Khowarizmi in 1175. But Leonardo had been the first to teach the subject,⁴⁶ having obtained a knowledge of both Greek and Hindu algebra. From his time on, to the invention of printing, interest in the subject became absorbing, the first public lectures, as we have seen, having been those by Sacrobosco, at Paris. The great need of mediæval algebra was that of a convenient symbolism. Only very gradually did our mathematical sign language attain its present development. It would be hard for a student of today, accustomed to the assistance which the mind derives from a symbolism presenting at once to the eye the full conditions of the problem, to realize the difficulties of earlier students in this regard. Modern study has rendered it probable, however, that a limited symbolism was introduced at least a century earlier than was formerly supposed. With the invention of printing these signs became fixed, and within fifty years a brilliant era began to dawn for algebra. In the meantime geometry, which had never been wholly lost sight of even in the darkest portions of mediæval life, was assuming fresh prominence.

From the time of Boethius and Isidore some book of Euclid continued to be taught. The text of the great geometer which has been handed down to modern times is founded on that by Theon of Alexandria about 410 A. D. In 1120, however, Adelard made his translation from the Arabic, which at once became popular. Soon after John of Seville translated fifteen books of Euclid. In 1220 Leonardo's "*Practica Geometriae*" was added to the Euclidean treasury and the "*De Triangulis*" of Jordanus, a few years later. These works were in turn supplanted by the translation of Giovanni Campano, a canon of the University of Paris, which continued to form the basis of printed editions until the era of direct translations from the Greek. That with the invention of printing about 1450 mathematical activity greatly increased is acknowledged on all sides.⁴⁷ The interest felt in the subject is shown by the fact that almost all the then written works on the subject were published either within the century or early in the next. The status in mathematical teaching prior to this time may be found by examining the requirements of mediæval universities on the subject. At the University of Paris logic was the favorite study, but in 1336 a rule was passed that no student should receive a degree without attending lectures on mathematics. A year or so later similar rules were passed at other universities. By the

⁴⁶ British Ency., ed. IX., p. 512.

⁴⁷ Ball: pp. 180, 181. After the publication of various editions of the Scriptures, and classics, that of a series of mathematical works immediately followed. Campano's Euclid was published in 1482. Widman's Arithmetic, 1489. Sacrobosco, 1495. Bradwardine, 1495. Pacioli, 1494. See Math. Dictionary (Hutton's).

statutes of Prague, 1384, candidates for degrees were required to have read Sacrobosco's "Treatise on the Sphere" and to be acquainted with the first six book of Euclid, optics, hydrostatics, the theory of the lever and astronomy. The requirements at Leipzig were borrowed from those of Prague. At Vienna, 1389, a knowledge of five books of Euclid, perspective, proportional parts, measurement of superficies and theory of the planets, were required.⁴⁸ While Sacrobosco lectured at Paris, Roger Bacon eulogized "divine mathematics" to crowded classrooms at Oxford. In the fifteenth century Lucas Pacioli lectured on mathematics at Rome, Pisa, Venice and Milan. Professor Ball, while admitting these facts, yet surmises that mathematical studies were pursued in a half-hearted manner only, and that probably "very few of the students mastered the subjects mentioned." Another writer, on the contrary, opines that the "very opposition of the authorities to mathematical progress" spurred the students (through a perverse instinct in human nature) to greater efforts.⁴⁹ Both these suppositions cannot well be true; let us charitably hope that both may be equally unfounded. That they were so in one instance is evidenced by the interest in trigonometry awakened throughout Germany by the teaching of the celebrated Purbach at the University of Vienna. The study of trigonometry had hitherto been chiefly confined to the thirteen books of Ptolemy in Latin or Arabic translations. Purbach and his still more famous pupil, Regiomontanus [Königsberg], introduced several new trigonometrical functions unknown to the Greeks and even the Arabs. Purbach is noted by the French astronomer Bailly as the first European astronomer to do original work. Regiomontanus ranks among the greatest men that Germany has ever produced. Master and pupil worked together to produce tables of sines and cosines, tangents and cotangents, of hitherto unknown accuracy. Later Regiomontanus studied Greek under Cardinal Bessarion in order to translate Ptolemy from the original. He was called to Rome by Sixtus IV. to aid in the reformation of the kalendar, but died before this great work could be accomplished. His trigonometrical work was continued by Rheticus, a friend of Copernicus. Rheticus was the first to free trigonometrical functions from their dependence on the radius of the circle. He constructed the right-angled triangle, making the functions directly dependent upon its angles. When we consider that the older method was still used in English text-books of a generation ago, we realize the extent to which early European students antedated modern methods. Good work in trigonometry was also done by Vieta in France and by Romanus of Louvain. But we an-

⁴⁸ Laurie: Rashdall: Med. Universities.

⁴⁹ Ball: p. 179. Smith and Karpinski: p. 132.

ticipate. We have now reached the full dawn of the Renaissance, "marked by a revival of nearly all branches of mathematical science." Already, in 1410, Beldomandi of Padua had contributed his *Summation of Geometrical Series*; Nicholas Chuquet, a bachelor of the University of Paris, had written, in 1484, his *Triparty*, a work containing the first known use of radical indices. Incidentally, Prof. Ball notes it as indicating the extent of mathematical teaching at the time to have been somewhat greater than has been supposed.⁵⁰ Pacioli had dealt with quadratic equations, surds and incommensurables, and was one of the first to apply geometrical constructions to algebraic formulæ. It remained, however, for the sixteenth century to usher in a brilliant group of algebraists who have shed permanent lustre upon their age and country, and whose mathematical jousts, or public contests, excited a degree of attention and interest which it is doubtful whether similar achievements could secure to-day. Among these men were Scipio Ferro, Nicolo of Brescia, surnamed Tartaglia, or the Stammerer; Cardano, Ferrari, Bombelli, in Italy; Vieta in France, Stevin and Romanus in Belgium. Among the burning questions of the day was the solution of cubics, first undertaken by Scipio Ferro, professor at Bologna. A fuller solution was obtained by Tartaglia, to whom perhaps we owe the greatest contribution made to algebra during the sixteenth century; yet, though nobly endowed by nature, fortune used him most harshly. Terribly injured as a boy during the siege of his native town by the French, he was left for dead, but nursed back to life by the loving care of his mother. His injuries, however, left an impediment in his speech ever after. Too poor to procure slate or pencil, he chalked his problems on the tombstones of a neighboring church. Genius triumphing over all difficulties, he began public life by lecturing at Verona. In 1535 he obtained the chair of mathematics at Venice. Winning great fame by his victorious contests with several opponents, he attracted the attention of Cardano of Milan, and from this time forth his life was embittered by the jealousy and treachery of this Judas among mathematicians, who acquired an immense reputation in his own day by the solution of problems which he wrung from friends or stole from rivals, seeming to shrink from no meanness or perfidy to secure his ends. Tartaglia had distinguished himself not only in the solution of cubics, but by his investigation into the laws of projectiles and his partial anticipation of Newton's Binomial Theorem.⁵¹

He now began a work which he intended to embody the mathematical research of a lifetime and constitute his memorial. Dying,

⁵⁰ Ball: p. 206.

⁵¹ Ball: p. 219.

however, before it was finished, the work was seized upon and dishonestly appropriated by Cardano, and even to-day, in our modern text-books, one of Tartaglia's solutions still passes current under the name of Cardano. Stripped of his stolen honors, Cardano seems, however, to have done some excellent work. His *Ars Magna* has been pronounced an advance on any previous algebra, but we do not know how much of this may be the work of his pupil, Ferraro, who, Cajori tells us, "propped up the reputation of his master by his brilliant solution of bi-quadratics"—an achievement to be noted, since a no less authority than Abel has pronounced the *general* solution of higher equation impossible.⁵² If report is to be trusted, Cardano ended his wild career [stained by other crimes than mere professional theft] by suicide—in support of his reputation as an astrologer. Having foretold the day of his death, he felt bound to verify his own prediction. Names of Italian mathematicians now multiply too rapidly for individual mention. Bombelli discussed "imaginary quantities," in anticipation of strictly modern work by Euler and Gauss, while Maurolycus, Xylander and Commandino translated Euclid, Diophantus and other mathematical works from the Greek, and Greek mathematics became the passion of the day. Meanwhile, in pleasing contrast to the sorrowful experience of Tartaglia, we may note the career of Vieta, the great French algebraist, who basked in the favor of king and court. He owed his promotion under Henry IV. to two happy incidents—his discovery of the key to the Spanish cipher, by which he rendered important service to the State, and his successful solution of a problem propounded by the Ambassador of The Netherlands.

The latter had boasted to Henry that France "did not possess a single geometer" who could compete with his own countryman, Adrian Romanus, of Louvain. The monarch's pride was piqued and Vieta was summoned to the royal presence. The proposed problem was formidable, but admitted of simplification. This the genius of Vieta quickly perceived and in a few minutes he returned to the king with a double solution. It was now the French mathematician's turn to challenge his brother of Louvain. Romanus solved the problem proposed to him by the use of conic sections, but receiving from Vieta a more rigorous Euclidean solution, he at once journeyed to France to make the acquaintance of his illustrious rival. It is to the credit of both men that this acquaintance developed into a warm and lasting friendship. The close of the sixteenth century witnessed in Italy the foundation of a science of dynamics, which owed its rise chiefly to the investigations of Stevinus, Galileo and Torricelli into the laws of motion and physics. Stevinus investigated statics, Gali-

⁵² "Abel's theorem" had been anticipated by Paolo Ruffini in 1798.

leo dynamics. The fame of the former rests on his "Statics and Hydrostatics," published at Leyden in 1586. Galileo was practically the founder of dynamics, though his principle of virtual velocities had been partially understood by Guido Wbaldo somewhat earlier. Galileo himself, it may be noted, was won from the study of medicine to mathematics through the chance hearing of a lecture on geometry by the Jesuit Father Ricci.

To Stevinus we owe another contribution to mathematical science, humbler in appearance, but really more important than even his work on statics. This is his "La Disme" [Bruges, 1585], in which we find the first systematic treatment of decimal fractions. It seems surprising that so comparatively simple an invention as that of decimal notation for fractions should have been so long delayed, yet simple as it appears to us its introduction was very gradual. As far back as the twelfth century John of Seville had employed a system of decimals for the extraction of square roots, while Regiomontanus adopted a decimal division of the radius in trigonometry. But neither mathematician grasped the full import of his method. It remained for "Stevin of Bruges" to apply the new fractions to all the operations of ordinary arithmetic. "He describes in express terms the advantages, not of decimal fractions only, but of a system of decimal weights and measures," such as is now realized in the French metric system. To him also belongs the honor of introducing exponents in algebraic expressions; he revived also Oresme's fractional indices, which had remained practically unnoticed.

Stevinus has been supposed by some to have been a Protestant, on account of his friendship for the Prince of Orange and the favor shown him by that leader. The times were such as led men to exercise occasional reticence in religious matters. But a clause in his will leaving a considerable sum to his parish church to be spent in Masses for his soul seems to determine the question of his Faith quite definitely.⁵⁴

We have now reached the closing years of the Renaissance and are approaching the threshold of modern mathematics. We do not cross it, however, until we reach the era of Newton, usually regarded as marking the beginning of the modern period in mathematics. We can only attempt to sketch briefly the activities of Catholic mathematicians during this remaining interval. The scene is a crowded one. "The prodigious scientific progress in France during the reigns of Henry IV. and Louis XIII. had enriched mathematics," writes Cajori,⁵⁵ "with imperishable treasures." Into the brief space of less than a century must be crowded such names as Gul-

⁵³ A. Quetelet: *Sciences Math. et Physiques chez les Belges*.

⁵⁴ *British Ency.* IX ed. art. Stevinus.

⁵⁵ Cajori: p. 199.

dinus, Cavalieri, Viviani, Desarques, Mydorge, de Meziriac, Mer-senne, St. Vincent, Roberval, Fermat, Pascal and Descartes, with whose name we close our sketch. "The miraculous powers of modern calculation," to quote once more from Cajori,⁵⁶ "are due to three inventions—the Hindoo-Arabic notation, decimal fractions and logarithms. To this category we may add a fourth—the infinitesimal calculus. We have seen how the first two were attained by students of mediæval or Renaissance Europe; let us see how nearly the last was approximated by the same before the opening of the modern era. Vieta had left algebra in a state of sufficient perfection to lend itself as a ready instrument to this crowning branch of mathematics. Early in the seventeenth century Paul Guldin (or Guldinus), a Swiss convert, who later entered the Jesuit Order (and to whom the Jesuit College of Gratz owed its mathematical reputation), had been led by the study of Greek works to investigate the volume of a "solid of revolution," and in 1635 published his "De Centris Gravitatis." In the same year Bonaventura Cavalieri, who also at an early age had entered the Jesuit Order, published his "Geometry of Indivisibles." The two works approached a similar subject from different points of view, but together formed the base of departure, both for Descartes' analytical geometry and for the calculus of Newton and Leibnitz. Towards this last focal point in mathematical history the progress of the past fifty years had been converging. More and more the most acute intellects of the day were bending their genius toward the discovery of the methods of the differential and integral calculus. By Cavalieri's method all surfaces, or solids, were considered as composed of an infinite number of lines, or planes, whose summation gave the area, or volume. Among those who labored on the same subject with Cavalieri, de Roberval, Fermat and Descartes approached most nearly to the perfection of its theory, although for sixty years Cavalieri's methods were used as a species of integral calculus and yielded correct results.

To the reader of ordinary biography Newton and Leibnitz stand out so preëminently as the sole inventors of these potent methods which have so vastly extended the powers of modern mathematics that it is difficult for any but the close student of mathematical history to realize how slight is the dividing line which separates these men from their immediate predecessors. So slight that both La Grange and La Place later maintained their own countryman, Fermat, to have been the true originator of the infinitesimal calculus,⁵⁷ the work on which his claim to this honor rests having been written thirteen years before the birth of Newton. We now find the figures

⁵⁶ Cajori: p. 161.

⁵⁷ Cajori: p. 174, p. 200.

of two other French mathematicians towering before us ere we reach the portals of the modern era, where our study closes. They are those of Pascal and Descartes, the creators of the sciences of analytical and synthetic geometry, an expansion of the methods of ancient geometry undreamed of by Euclid, and as potent a re-agent of mathematical problems as the calculus itself! But as Newton and Leibnitz had their precursors in Cavalieri, Fermat and others, so Pascal and Descartes were preceded by Desargues, whose lectures on space analysis, transversals, polar lines, limits, etc., exerted much influence on both the future geometers.

With Pascal's precocious genius we are most of us acquainted. At fourteen he was admitted to the meetings of Roberval, Mersenne [a Franciscan friar], Mydorge and other French geometers who gave birth to the French Academy of Science. At sixteen he had composed a masterpiece on conics. His analysis of curves, algebra of probabilities, analytical geometry and physics raised him to the highest rank in mathematics. Into his life of religious mysticism at Port Royal we need not enter. René Descartes, born in 1596, near Tours, was educated at the Jesuit School of La Flèche and there became acquainted with Mydorge and Mersenne. Skeptical in philosophy, he remained orthodox throughout life in his religious creed. For a while he embraced a military career, but in 1628 was persuaded by Cardinal Berulle in a long conversation on the subject to devote himself to science. His analytical geometry and investigation of geometric and mechanical curves were some of the results of this choice. To ancient Greek geometry the conception of "motion" was unknown; to Descartes this conception became the starting point for his study of "loci," and that in turn the source of many of the most fruitful investigations of modern mathematics. We now bring to a close our brief survey of the mathematical progress of the Middle Ages, hoping to have made clear a few salient points. First, that during the general desolation and distress which followed the Fall of Rome the tradition of classic mathematics was kept alive chiefly by churchmen, and that the mathematical revival which followed the "Iron Age" was due almost wholly to the efforts of Gerbert, Pope and scholar; secondly, that we have strong, although not demonstrative, evidence that the decimal notation of the Hindoos was introduced into Christian Europe, through Alexandria, before the Saracen set foot in Spain, but that, however great may be our debt to Arabic culture, its acquisition was due to the ardor and zeal of the Christians in seeking it, rather than to any readiness of the Moor to impart it; and, thirdly, that not only was mathematical activity from the thirteenth to the sixteenth century much greater than is commonly admitted, but its progress was most notable precisely in those countries most closely connected with the Papal See. While, how-

ever, as we have seen, the mathematicians of Catholic Europe anticipated, or all but anticipated, many of the discoveries of modern work, there is one rung on the ladder of mathematical ascent, noted by Cajori, which seems to lie wholly, almost amusingly, in Protestant hands, since of Baron Napier, the inventor of logarithms, we are told that "while mathematics were his favorite amusement, the business of his life was to show that the Pope was Antichrist."

Briggs, who collaborated with Napier, was a Protestant, while the only earlier scholar who might be thought to have "anticipated" this labor-saving invention was Stifel [Stifelius], a recreant Augustinian monk, who had embraced the opinions of Luther! Ball, who gives us these details, also admits that Napier's "Invention of Logarithms" [1614] was the "*first* valuable contribution to the progress of mathematics made by any British writer"⁵⁸—an admission which might perhaps be used to confirm data already given as to the earlier mathematical development of Southern Europe! Broadly speaking, then, it seems clear that the Church from the first recognized the importance of this apparently abstract science and steadily encouraged its teaching. And when we remember the acknowledged difficulty of first steps, it seems equally clear that we should give to the men who built up the science of mathematics from its scanty heritage of Roman days—introducing a foreign notation and translating two languages to win a knowledge of previous attainment, thus laying the foundation for the magnificent developments of modern times—at least a modicum of praise.

E. VON RYCKEN WILSON.

⁵⁸ Ball: p. 215, p. 235 also p. 195.

CALIFORNIA: THE FUTURE EMPIRE STATE

SAN FRANCISCO FROM THE SEA.

Serene, indifferent of Fate,
Thou sittest at the Western Gate;
Upon thy height, so lately won,
Still slant the banners of the sun;
Thou seest the white seas strike their tents,
O Warder of two continents!
And, scornful of the peace that flies,
Thy angry winds and sullen skies,
Thou drawest all things, small or great,
To thee, beside the Western Gate.

—Bret Harte.

COSMOPOLITANISM characterizes the Pacific's greatest port, for every race that walks the paths of other lands also walks the steeps and deeps of former Yerba Buena, as the Mexicans dubbed their undulating habitation in days ago; nor should it be forgotten that "San Francisco" was "Yerba Buena" until 1846, when Captain Montgomery, of the United States sloop-of-war Portsmouth, raised the American ensign and named the embryonic metropolis after the well-known Mission of San Francisco de Asis, popularly known as Mission Dolores, founded in 1776 by Father Falou. But be their habitat of former days Ireland, Orient, Jerusalem, Egypt or Antipodes—and all are represented here—the "native sons of the Golden West" look askance upon the tactless newcomer who flippantly refers to San Francisco as plain and unclassical "'Frisco," for it should be understood that neither New York nor Boston (not to mention Chicago or Los Angeles) contains more boastful boosters than does the big port on 'Frisco Bay.

For half a century an army of workers toiled to bring the city up to our modern conception of a great centre of industry, and then a slight pulsation of Mother Earth tumbled everything into a mass of smoldering débris. This was in April, 1906, but in the few intervening years those smoldering mounds have transformed into well-paved avenues, lined with costly chambers of commerce, grand cafés, elegant mansions of the rich, comfortable homes of the multitude, countless thousands of apartment houses and those things of iniquity known as "flats," all of which are reached by modern trolleys and ancient cable cars that seem to stand on end when tobogganing up and down streets pitched at an angle of forty-five degrees; indeed, some

of the inclines are so steep that the conductor in the rear deems it expedient to help out the gripman by clamping the back brakes to the track, and though the maddening flight is calculated to stifle the tremulous heart, one soon becomes as nonchalant as the old-timers themselves. Sightseeing cars—they are dubbed “rubbernecks” out there—run to the Latin Quarter, Portsmouth Square and Chinatown, and of course the bombastic “lecturer” highly embellishes everything along the route; but trolleys and cables reach all points, and those thrilling hurdle races up and down and around the hills—especially Knob Hill, the rendezvous of the aristocracy—surpass anything the motors have to offer in the way of exhilaration. Market street, the principal business thoroughfare, starts at the ferry, its breadth of one hundred and twenty feet allowing four trolley lines to operate. New business structures rank with the best, but symmetry is unknown, and alongside elongated skyscrapers we behold two and three story houses of the Eldorado City variety. The City Hall, standing opposite a pretty little park, is one of the grandest buildings on the Coast; it is also gratifying to note that the Auditorium and Palace of the Fine Arts were not consigned to the junkman when the axe of demolition was swinging at the Exhibition grounds. Like all fires, a cleaner and better city has been founded on the blackened ruins, and out in the Presidio section many attractive homes have been erected, the rapid long-distance electric cars allowing downtown workers to reach “war gardens” ten miles from O’Farrell and Market streets in less than thirty minutes.

Portsmouth Square is the Plaza of Castilian days, and here we find a fountain memorializing Robert Louis Stevenson, who spent many carefree hours analyzing the human flotsam and jetsam that swept in and out on the undulating tides of Time. Let us trust that the inspiring message carved on the façade of the aquatic monument will hearten those unfortunates who “put an enemy in their mouths to steal away their brains”:

“To be honest, to be kind; to earn a little; to spend a little less;
To make upon the whole a family happier by his presence;
To renounce when that shall be necessary and not be embittered;
To keep a few friends, but these without capitulation;
Above all, on the same grim condition, to keep friends with himself—
Here is a task for all that a man has of fortitude and delicacy.”

The Plaza of today gives no inkling of the turbulence prevailing in the early '60s, and here we pause to scan a chapter pertaining to other days. Writes Gertrude Atherton in her well-known work, “A Daughter of the Vine”: “The wild life about the Plaza, the

gambling houses, the saloons, the fatal encounters in the dark contiguous streets, the absolute recklessness of the men and women, interested him profoundly. * * * The scene which he most frequented, which rose most vividly when he was living his later life in England, was El Dorado. It had three great windows on the Plaza and six in its length — something over one hundred and twenty feet. The brilliant and extraordinary scene was visible to those that shunned it, but stood with a fascinated stare; for its curtains were never drawn, its polished windows were close upon the sidewalk. On one side, down its entire length, was a bar set with expensive crystal, over which passed every drink known to the appetite of man. Behind the bar were mirrors from floor to ceiling, reflecting the room, doubling the six blazing chandeliers, the forty or fifty tables piled high with gold and silver, the hard, intent faces of the gamblers, the dense throng that ever sauntered in the narrow aisles."

When the straggler after news and views has thoroughly visualized the peasantry lolling about Portsmouth Square, he gets down on all fours to begin the ascent of that lofty escarpment known to the natives as Telegraph Hill, where Italians, Frenchmen, Portuguese, Mexicans, Greeks and whatnot dwell in multitudinous profusion, and every tongue but the official language of the realm. It is a motley crowd, this *hoc genus omne*, drawn from every land beneath the cerulean arch; and the inquisitive itinerant quite naturally enters one of the little cafés to rest his weary limbs while sipping a five-cent goblet of excellent claret with entrees of queer-looking cheese made from the milk of the ass and hot tortillas baked by an embonpoint señora who came all the way from Guadalajara to tempt the gourmets on the Hill; or if you happen to stray into the Fior d'Italia, on Broadway, Signor Rosetta, the kindly and swarthy chef, will induct you into the garlicized mysteries of tagliarini or ravioli, while the amazing *copia verborum* rolling around the dining hall will help complete the delusion that you are actually eating your dinner in one of those open-air cafés so common to the streets of old Napoli. In the Argonaut days the mystic signs weren't wafted through the ether as they are today, so signalmen stood on the apex of Telegraph Hill and scanned the Heads at the Golden Gate for inbound vessels, wigwagging the news to the pioneers in the vale below; hence the patronymic. It would be superfluous to suggest that the most far-sighted observer on the Hill in '49 could not visualize the forests of masts now towering above the estuaries of San Francisco Bay.

Catholics are pretty well represented in every walk of life, but

everybody, even those who never enter a church (and they are numerous), are proud of their Mission Dolores, by which they mean the little adobe Church of San Francisco de Asis, dating from 1776, "amid the heathen surroundings of the port of San Francisco," to paraphrase Father Palou, its founder. The edifice is no longer used for worship, having been supplanted by the modern church adjoining, but it is generally regarded as the most sacred and most historic spot in San Francisco. Bret Harte's poem, "The Angelus," symbolizes the veneration in which the Mission is held by the populace:

THE ANGELUS.

Bells of the Past, whose long-forgotten music
Still fills the wide expanse,
Tinging the sober twilight of the Present
With color of romance!
I hear your call, and see the sun descending
On rock and wave and sand,
As down the coast the Mission voices, blending,
Girdle the heathen land.
Within the circle of your incantation
No blight nor mildew falls;
Nor fierce unrest, nor lust, nor low ambition
Passes those airy walls.
Borne on the swell of your long waves receding,
I touch the farther Past;
I see the dying glow of Spanish glory,
The sunset dream and last!
Before me rise the dome-shaped Mission towers,
The white Presidio;
The swart commander in his leathern jerkin,
The priest in stole of snow.
Once more I see Portola's cross uplifting
Above the setting sun;
And past the headland, northward, slowly drifting,
The freighted galleon.
O solemn bells! whose consecrated Masses
Recall the faith of old;
O tinkling bells! that lulled with twilight music
The spiritual fold!
Your voices break and falter in the darkness—
Break, falter and are still;
And veiled and mystic, like the Host descending,
The sun sinks from the hill!

Oakland is also forging to the front as a shipbuilding center, and the men behind the big Government concrete shipbuilding plant on Government Island, in the Oakland estuary, opposite San Francisco, assert the concrete ship is an absolute and unqualified success. They say puffed brick concrete makes a homogeneous material which cannot be separated from the concrete ribbing, and certainly there is a vast improvement over the first ship built, the Faith. The new vessels are shapely, and are said to be lighter than steel and cost much less.

The old padres have their critics, pro and con, but they performed wonderful work with the material at hand. Their pathway was not strewn with roses, nor should it be forgotten that they came as strangers into a strange land, to work among a crude, untutored and uncivilized race. They learned the various dialects of the tribes and instructed the native neophytes in Catholic doctrine. This work required rare patience and diplomacy to redeem their charges from savagery, with the result that practically all the natives were baptized ere they passed to the happy hunting grounds of their forbears; moreover, the detestable malevolence of the Mexican Government reacted against the endeavors of Junipero Serra and his loyal followers. However, the old Missions are still extant, still actively engaged in reaping souls in God's vineyard, and while the old Viceroy's are the rightful objects of "a dismal universal hiss, the sound of public scorn," as Milton said, the Missions and the faithful fathers are the pride and veneration of the great Western Commonwealth.

The first Mission in Alta California, as the State was known in the Spanish era, was established by Serra in 1769 at San Diego, and eventually a chain of twenty-one was strung for a distance of 650 miles, or as far north as the Sonoma Valley, which lies about twenty miles above San Francisco. The majority of these churches are still in use, though several have perished from the face of the earth; and the question has frequently been asked: "Where did they get the implements to cut the stone or turn the wood? Who drew the plans? Who directed the mechanics? Whence came the material?" These queries have baffled many able minds, but the structures were evidently planned and erected by very capable architects and artisans; this is probably the reason why the railroad stations, big hotels and palatial mansions are patterned after the Mission style of architecture. Irrigation ditches were introduced, and countless thousands of acres produced crops of every variety, not to mention a vast array of domestic animals. The remains of an irrigating sluice down at San Diego show the early agricultural instructors to have been

geniuses of a high order, as the ditch is a solid mass of cement and rock for a distance of seven miles—and all this was brought into being just about the time George Washington and General Lafayette were hobnobbing around what is now known as Trenton, New Jersey.

John S. McGroarty, of Mission Play fame, undoubtedly crystallizes the prevailing opinion of the padres in a pretty little elegy entitled "In Monterey," which refers to Stevenson's early struggles against sickness and poverty:

IN MONTEREY.

When long ago he wandered here,
Heart-hungered, sick and poor,
No roof was bent to shelter him;
No welcome at the door.
In all the streets of Monterey
With sun and shine aflame,
No word was passed that they might know
The Prince of Dreamers came.

There sped no song to meet him
From lute or lifted lyre,
When here the Master Singer passed
To seek his heart's desire;
No hand was raised to help him,
No lips with cheer to greet,
Till, worn with fast and weariness,
He fainted at their feet.

Then one there was who lifted up
The fever-tortured head,
And took him to his pitying heart,
And gave him drink and bread;
He gave him shelter and a bed,
Nor asked his name to know—
And of all the men in Monterey,
It is to him I'll go.

For 'tis the tale I love the best
These wandering trails among,
When from the ancient Mission tower
The Angelus is rung—

This tale of him whose songs I sing,
Though dead he lies and still,
"The sailor who is home from sea,
The hunter from the hill."

Stevenson was an ardent admirer of the padres and their work; indeed, it is common knowledge that he frequented Catholic services in various places, and perhaps the handclasp of true friendship extended to him in his hour of need by one of the fathers struck a responsive chord in the great novelist's heart.

The promulgation of the bone-dry law has caused much weeping and gnashing of teeth in the Golden State, but if the "greatest vine in the world" must needs pass unto that far-flung bourne from whence no traveler returns, as the Bard of Avon was wont to say, Santa Barbarans will "waft a sigh from Indus to the Pole" that will suffuse their sunny clime with the "hue of dungeons and the gruesome scowl of night." For it should be known that this famous vine was planted by the padres more than one hundred years ago, and from ten to eleven tons of delicious black grapes are obtained annually. For many year past one hundred and twenty gallons of wine have been made from its fruit. Its leaves and branches spread over an area of one hundred and fifteen square feet, while it is eight feet in circumference at its largest part. The vine really consists of two parts, which have encircled each other as they grew, forming a spiral, and the immense size of the branches requires a heavy framework of timber to support them, thus affording shade for more than one hundred people when seated below it.

The natives loudly proclaim California as the greatest place on earth, but not one in a hundred has ever been beyond the Seal Rocks, out at Golden Gate Park. They secure a knowledge of the wonders of their Commonwealth from newspapers, books, Eastern and foreign tourists, bringing to mind a well-dressed Cockney we met while strolling along the Thames Embankment. Though born in Putney, he had never entered the House of Parliament close by, didn't know the location of Queen Victoria Institute or Brompton Oratory, and the extent of his travels was a trip to the gently sloping shore of Brighton Beach, and ever after dated everything from this great red-letter day of his life. Perhaps a few of the natives know something of mining nomenclature—such, for instance, as Whisky Bay, Brandy Gulch, Loafers' Retreat, Git-Up-and-Git, Gospel Swamp, Lousy Ravine, Petticoat Slide, Hell's Delight, Micky Kelly's Wad, Piety Hill, Shirt-tail Canyon and all the other lodes that helped to build those gilded domes on Knob Hill and Burlingame, not to mention the re-

habilitation of those crumbling walls of innumerable palaces in Italy, England and elsewhere. Moreover, it should not be overlooked that since the joyous day in 1848 when James W. Marshall uncovered the first nugget of gold the production of this precious metal represents the great sum of \$1,700,000,000! Oil wells also help things along by gushing out 100,000,000 barrels a year.

A jump of 600 miles—a mere trifle in California—brings us to the Imperial Valley, sections of which fall below the level of the sea, and while this low-lying land makes life unbearable during the summer days, it helps the cotton crop, as the 30,000 bales of last year eloquently testify. It will also be recalled that the edenic city of Imperial is imperiously but capably ruled by ladies fair but firm, to wit: the Mayor, Postmistress, Health Officer, School Superintendent, librarian, teachers, secretary water company, editor, printers, grocers, farmers and cotton pickers. Verily, the ladies of Imperial City are rapidly dwarfing mere men to mediocrity!

Statistics are monotonous, it is true, but a few words will suffice to show the illimitable resources of this opulent daughter of Fortunate: Gold mines are still in operation; minerals, including quicksilver, of various kinds are found in many sections; forests of precious woods represent an empire's ransom; borax and antimony production soars to millions; coal, iron, petroleum, asbestos and sulphur, all of which are in great demand at high prices, are being brought to the earth's surface in vast quantities. Even salt is manufactured from sea water at Alameda, while down at Salton, on the Colorado Desert, thousands of tons of this commodity are yearly sent to the refineries. Asphaltum is also produced in considerable quantities. Building materials of every description are also locked within the subterranean vaults of this giant Golconda of the West. Add to all these natural gifts tea, rice, cotton, silk—not to speak of climate, ostriches, tourists, canyons, mountains, geysers, mineral springs and "them rich guys from back East"—and it is readily seen why California is destined at no distant day to become the premier Commonwealth of the Republic.

Automobiling has been the means of killing two birds with one stone—making thousands of miles of good roads and thousands of spendthrifts, for anybody who is anybody—and everybody in California considers himself somebody—has a car. Nor is there a spot beneath the eternal stars where cars can be used to better advantage. The rural thoroughfares are perfect, the climate generally sublime and the captivating scenery along the route draws your thoughts up and away from this wretched world of lies. One agreeable tour by auto-bus jogs along for thirty-five miles to Palo Alto, the home of the

magnificent Stanford University, and here we get a glimpse of San Francisco's aristocratic suburbs, such as San Mateo, Menlo Park, Burlingame and Las Altos, mostly patronized by patricians who have acquired fortunes in divers and devious ways. For miles and miles eucalyptus and cypress trees line the avenues, and on Sundays thousands of cars race along to Palo Alto. It is a merry, joyful crowd, and no one seemingly cares for what futurity has in store for them. The "car" has its faults—about as numerous as the proverbial leaves dotting the fragrant paths of Vallambrosa—but its advent has transformed cumbersome country roads into level and delightful highways, thus accelerating travel and developing sections hitherto beyond the reach of men. It is estimated that the entire system will comprise ten thousand miles of perfect roads. Even El Camino Real (the King's Highway), laid out by the ancient pioneers from San Diego to San Francisco, a distance of six hundred miles, is now embraced in the new State highway system, extending from Oregon down to the borderland of Mexico and costing the State upwards of \$30,000,000.

There are as many kinds of climate in California as there are styles of ladies' headgear. For instance, around the Golden Gate the weather is neither hot nor cold—sharp and chill at night and warm in the sunlit hours. Across the four-mile bay in Oakland, shielded from coastal blasts by the Berkeley Hills, a superior climate prevails, and this brings many homeseekers from the sister city. Rose-embowered Hayward, fifteen miles away, protected by the hills, also enjoys warm, agreeable days, the same being true of venerable, metropolitan San José, proud and progressive ruler of the Santa Clara Valley, teeming with prunes, oranges and fruits of every variety. Sacramento is pleasant when "that orb'd continent, the fire that severs day from night," is beaming on Magellan, but becomes a trifle too warm for comfort when the great ball squanders its caloric rays during the summer solstice throughout the Sacramento Valley; and as for Bakersfield, down there in the oil country—whew! we encounter "whirlwinds of tempestuous fire."

James Lick was a Pennsylvanian who went to California in 1847 and acquired a fortune. Dying a bachelor, his money went to charities, but the largest donation (\$700,000) went to establish the Lick Observatory on top of Mount Hamilton, 4200 feet above the level, and the jaunt by auto wafts you along a series of rustic avenues characteristic of Central California. The great 36-inch telescope is just twelve miles from San José as the bird flies, but as there's a bend for every day in the year between Smith's Crossing and the Observatory, a distance of seven miles, the big auto-stage requires twenty-five

miles to negotiate the distance. It is therefore readily seen how circuitous is the bending trail leading to what is said to be the largest lens in the world. As a matter of fact, there's only one competitor on the planet in the line of crookedness, and this is why many visitors board the big ferryboat running from Market street to the charming suburb of Sausalito, to entrain at that point on the Northwestern Pacific Railroad for Mount Tamalpais, some twenty miles from San Francisco, and after an hour of zigzagging and twisting and turning this way and that way, until one is on the verge of *mal de mer*, we are just about half a mile above those moving Lilliputians and their tiny cottages the lens discerns in the vale below. The comfortable home of Luther Burbank, the "plant wizard" of charming Santa Rosa, and the picket fence surrounding the modest bungalow of the author of "Dr. Jekyll and Mr. Hyde" at Calistoga, where Stevenson used the telephone for the first time in his life, are brought to view by the aid of a field glass. The frigid sentinel of the solitudes two hundred miles to the north—King Shasta—fails at times to fling his shimmering crown above the horizon, but a remarkable vista is presented of the Santa Cruz and Sierra Nevada Mountains. Even the "Cambridge of the West," as the intellectual luminaries of Berkeley love to term their handsome and austere university town, appears in microscopic outline far and away in the distant reaches of space; and when the shades of night had mantled all in darkness and "the planets in their station list'ning stood," the twinkling lamps illuminating San Francisco Bay dwarfed to nothingness the famed lights of ancient London Town.

There are about 10,000 miles of steam and electric lines in the big State, but it is truly remarkable that visitors to Eureka for fifty years were compelled to travel by the lumbering stage or board ship at San Francisco and sail for two days on Pacific's swell in order to reach the principal port of Northern California, but now the Northwestern Pacific Railroad covers the 284 miles in twelve hours. Everything in the north differs from the south—climate, scenery, agriculture and people. Rain is more frequent and the seaborne winds at times are biting; forests and rugged steeps are on every hand; farm lands and houses bear a stronger resemblance to Eastern methods, while everybody seems imbued with greater animation than is found below "the Bay." Chicken and vegetable farms, vineyards and hop fields are noted all through the Russian River country, and here we enter the vast redwood forests of the Eel River basin. Herr Humboldt honored every place on the map with a visitation, and perhaps this is why the small estuary on which the lumber port of Eureka is situated is referred to as Humboldt Bay; however, the natives are

quite positive that Lieutenant Grant was stationed there years before he wore the epaulets of a general, and the local troubadours superciliously remind you that Bret Harte always wended his way to Eureka when he wished to scale the sublimest pinnacles of Parnassus! The vast silent forests are also the rendezvous of big game, such as deer, bear and mountain lion.

Those who have seen sketches of early Sacramento naturally picture the capital as a conglomeration of rude huts, path-finders, prospectors, beer saloons, dance halls and the like, but times and people change, and this is why the seat of legislation has been metamorphosed into a rich, populous and handsome city, with modern buildings, elegant homes, broad and shaded streets, a Capitol second to none, a Cathedral of dignified and imposing mien. It was in Sacramento that the first spadeful of earth was dug for the building eastward of the Union Pacific Railroad, that "great highway of the nations" that sent the lumbering prairie schooner drifting gently down the tides of sleep, drove the redman back to his hunting grounds, gave life to Jesse James and cut the schedule between coast and coast from four months to four days; indeed, as far back as 1883 a theatrical train shattered time from San Francisco to New York in about eighty-five hours! Sacramento is connected by the river of the same name with the metropolis, and while viewing the comfortable homes bordering the avenues of this placid City of the Sacramento the retrospective mind quite naturally reverts to the queer-looking miners' shacks embellishing the landscape in the days of old.

YO-SEMITE.

Thou hast Earth's utmost beauty, mighty gem
Of ice-wrought granite from the hand of God!
And never man thy purple deeps hath trod,
But he hath felt the awe that mantles them.

Thou art the loveliest poem of Nature; thou
Art Music, Mystery and Magnitude!
What eye e'er thy majestic glory viewed,
But wept and led the shaken soul to bow?

—Herman Scheffauer.

We are west-bound on the Southern Pacific Railroad and moving along towards Merced, and shall soon arrive at El Portal, the gateway to Yo-semite National Park. Why Americans go gallivanting around the globe to see things far inferior to their own product can only be explained by saying that people are like children—they always want the thing that is out of reach. Talk about cascades!

Gavarnie, in the Pyrenees, the highest in Europe, has a vertical drop of 1,226 feet, but this is double-discounted by Yo-semite Fall, which takes a flying leap through the ether of over 2,600 feet—twice as tall as Gavarnie and sixteen times as high as Niagara! And four more cataracts of tremendous girth (Bridal Veil has a drop of 900 feet in the clear) are always tumbling their snowy volumes o'er the spillways of that lofty drainage canal the guide calls the Merced River. Good fortune brought us to the Park on a blustery day, and the wind actually swayed the aerial aquatic veil hither and yon just as a bridal veil is wafted to and fro by an ordinary breeze!

Yo-semite's attractions are entirely too manifold to portray in restricted space—because the altitudinous walls of granite, deeps of bottomless canyons, fantastic peaks of colossal mould, diversified coloring of this charming rendezvous of gnomes and ogres, giants and fairies shatter all lines of circumscription. According to Samuel Murray, perhaps the greatest traveler of his time, he never beheld prospects equaling the "titanic shafts, labyrinthine passes and awe-inspiring sentinels of Yo-semite Park. Victoria Falls, in Rhodesia, is indeed one of the great wonders of the world, not less than 5,000,000 gallons of water rolling over its crest every minute of the day and night; but, in my opinion, even the appalling grandeur of Victoria Falls does not compare with the captivating garden of Yo-semite."

Heretofore, owing to the high altitude, this captivating playground of the Pacific Slope has been inaccessible the major part of the year, but things are being so shaped that motor parties may enter the park at all seasons. There is a low, level route into the great valley through the Merced River Canyon that does not reach an altitude of more than 2500 feet, and it is proposed to build a permanent boulevard into the valley over this route, thus allowing the motorist to enjoy the beauties of this wonderful reserve during the winter months as well as in the summer.

Of course, it is going to take a considerable sum of money to construct this scenic highway, and a campaign is now in progress to raise \$1,000,000 among the motorcar owners of California. This sum, added to the appropriation made by the Government and the State, will be sufficient to construct an all-year road of concrete into Yo-semite, ending at El Portal, the lower entrance to the valley.

Two hundred thousand out of the half million motorcar owners in the State will be called upon to buy a five-dollar good roads certificate and this money will be expended upon roads leading to the park.

The possibilities of Yo-semite have never really been developed

until recently, and this vast wonderland of the Sierras should become the Mecca for hundreds of thousands of visitors the year round. Accommodations in the valley and in the mountains are among the best in California, the hotel system now being developed by the Camp Curry and Yo-semite Park Company being inns possessing every comfort known to modern travelers. The routes into the valley have never opened until May, and are closed to travel by the end of September. However, the Merced Canyon route will render the park accessible at all seasons. Moreover, the daring ones who have braved the snowy elements to get into the valley during the winter solstice wax enthusiastic when referring to the scenic grandeur when Mother Earth has cast her ermine cloak far and wide o'er the widespreading boundaries of the park, and one descriptive writer of rare ability candidly admits his impotency in attempting to portray the magnificence of this mundane garden of the gods.

WILLIAM S. LONG.

Merchantville, N. J.

GOING TO THE ANT FOR WISDOM

“**G**O TO the ant, thou sluggard; consider her ways, and be wise; which having no guide, overseer, or ruler, provideth her meat in the summer, and gathereth her food in the harvest.”—Proverbs, vi., 6, 8.

“We’ll set thee to school to an ant, to teach thee there’s no labouring in the winter.”—King Lear, Act II, Scene 4.

“The ants are a people not strong, yet they prepare their meat in the summer.”—Proverbs, xxx., 25.

From remote antiquity ants have been famous for their industry, ingenuity, economy and their instinctive comprehension of the advantages to be derived from division and combination of labor. These characteristics have been the subject of observation and comment since the earliest times, the old idea of their great thrift and foresight being well exemplified in La Fontaine’s charming fable of the Grasshopper and the Ant. Poets have sung its praises, and it is famous in song and story. The high tribute paid the little insect in Proverbs is no doubt the reason back of this legend, which Whittier has charmingly put into verse.

King Solomon was once riding out from Jerusalem with the Queen of Sheba, and as he was able to understand the languages of all creatures, he heard the ants in a hill which lay in his path murmuring:

“Here comes the king men greet
As wise and good and just,
To crush us in the dust
Under his heedless feet.”

Upon his telling the Queen what he had overheard, she replied that those who perished beneath his gracious feet had a “too happy fate,” but the King, believing that “the wise and strong should seek the welfare of the weak,” turned his horse, and consequently his train of courtiers, aside. And the Queen, wise in her way, also commented:

“Happy must be the State
Whose ruler heedeth more
The murmurs of the poor
Than flatteries of the great.”

No insect is more familiar to man or more deserving of fame. Ants live in all lands and regions; they exist in enormous numbers, hundreds of thousands in one colony; they are not driven away by the changes of civilization, but mine man’s fields and invade his

dwellings. And many of the things which man attempts to do they accomplish more successfully, apparently, and may be his teachers:

"Turn on the prudent ant thy heedless eyes,
Observe her labours, sluggard, and be wise,
No stern command, no monitory voice
Prescribes her duties, or directs her choice;
Yet, timely provident, she hastes away
To snatch the blessings of a plenteous day,
When fruitful summer loads the teeming plain
She crops the harvest and she stores the grain."—Ben Jonson.

The community life of ants is a wonderful organization, to many observers not even excelled by human institutions; it is a perfect republic where each works for the good of the whole, each having his appointed work, laboring constantly for the general welfare, and ready to sacrifice himself to preserve the colony.

"and to the emmet gives
Her foresight, and intelligence that makes
The tiny creatures strong by social league;
Supports the generations, multiplies
Their tribes, till we behold a spacious plain
Or grassy bottom, all, with little hills,—
Their labour, covered, as a lake with waves;
Thousands of cities, in the desert place
Built up of life, and food and means of life!"
—William Wordsworth (*The Excursion*).

"And the red soldier-ants
Lie, loll, and lean,—
While the black steadily
Build for their queen."—Anon.

There are twenty-five hundred or more known ant species, and all live in permanent communities. There are no solitary ants, as among bees and wasps. Each member of the colony makes the common formicary its habitation; faithfully attending to the work allotted to the caste to which it belongs—be it a winged female (or queen), a winged male, a major worker, a minor worker, a soldier, or what not.

However, the intelligence ants show in their community life is not possessed to any great extent by individuals. Away from the inspiration of the tribe, he is a sad blunderheels, trusting to touch, or smell, or a sense of orientation, to guide him home. This fact Mark Twain humorously noted years ago in "*Tramp Abroad*":

"It seems to me that in the matter of intellect the ant must be a

strangely overrated bird. During many summers now I have watched him, when I ought to have been in better business, and I have not yet come across a living ant that seemed to have any more sense than a dead one. . . . I admit his industry, of course; he is the hardest working creature in the world—when anybody is looking—but his leather-headedness is the point I make against him. He goes out foraging, he makes a capture, and then what does he do? Go home? No; he goes anywhere but home. He doesn't know where home is. His home may be only three feet away; no matter, he can't find it. He makes his capture, as I have said; it is generally something which can be of no sort of use to himself or anybody else; it is seven times bigger than it ought to be; he hunts out the awkwardest place to take hold of it; he lifts it bodily up in the air by main force, and starts—not toward home, but in the opposite direction; not calmly and wisely, but with a frantic haste which is wasteful of his strength; he fetches up against a pebble, and, instead of going around it, he climbs over it backwards, dragging his booty after him, tumbles down on the other side, jumps up in a passion, kicks the dust off his clothes, moistens his hands, grabs his property viciously, yanks it this way, then that, shoves it ahead of him a moment, turns tail and lugs it after him another moment, gets madder and madder, then presently hoists it into the air and goes tearing away in an entirely new direction; comes to a weed; it never occurs to him to go around it. No; he must climb it, and he does climb it, dragging his worthless property to the top. . . . When he gets there he find that is not the place; takes a cursory glance at the scenery, and either climbs down again or tumbles down, and starts off once more, as usual, in a new direction." And so Mark Twain goes on at some length, until, in his attempts to prove that the ant fails in being all-wise, he makes it out a veritable booby and not at all worthy its reputation for wisdom.

Next to their community spirit the industry of the worker ants which go out foraging for the hive has made a particular appeal to the poets, science to the contrary. One says that they "scur and throng the velvet sward"; another calls them "good little house-keepers"; to Will Carleton they are "trim housewife ants with rush uncertain"; Robert Browning tells how, on a bright spring morning, "ants make their ado"; but to another poet, during the heat of a summer midday, they are "plodding ants that dream their work is done." Another, lying in the grass, notes how "grim, hurried ants across my palm run past the shortest way." E. R. Sill wonders how "the ant his zigzag way can hold through the grass that is a grove for him." Thomas Hood, describing "The Haunted House," sees that

"The emmets of the steps had old possession,
And marched in search of their diurnal good
In undisturbed procession."

Joseph Rodman Drake's "Culprit Fay" flits over the grass where
"toils the ant," George Eliot's "Spanish Gypsy" observes two galleys
moored apart, which

"Show decks as busy as a home of ants
Storing new forage."

And others have given us good pictures of the busy little creatures
in the following lines:

"The beaded ants prick out and in,
Mysterious and dark and thin."—Helen Hunt Jackson.

"An ant-hole, wrought in the sandy drouth,
Out of whose busy, populous mouth
The dwarfish tenants—an endless train,
Emerging, covered the tiny plain;
Eastward, and westward, north and south,
They toiled, with a constant will, to gain
The fairy stores of their winters grain.

"See the industrious emmets race
With forward course and eager pace,
Forth from their wintry hillocks store,
Blackening the narrow pathway pour;
And to and fro impatient run,
Exulting in the vernal sun."—Paul H. Hayne.

Is it any wonder that "to dream of ants denotes you will live in a
great town or city, or in a large family, and that you will be indus-
trious, happy, well-married, and have a large family"?

There is but one reason back of all this concentration of effort—
to provide food for the young larvæ and for the workers inside,
queens, nurses, and so on. For it is somewhat of a disappointment
to learn that the ant's foresight is but a fable, after all, as regards
the storing up of grain for winter use. As ants remain dormant
during the winter, La Fontaine's fable would be more along the
line of natural facts had he had the ant survive the winter because
of her habit of making a permanent home, and not through her
food-storing bent. Indeed, the poets have made the ant altogether
too much of a grain-eater; these insects much prefer the sweet

honey of their plant-lice cattle to grain, although they do eat small seeds, and even feed their grubs on meal made of cut-up seeds and grain. No doubt this mistaken notion of the ant's passion for storing grain arises from the resemblance of the large white larvæ to seeds. The nurse-ants are always moving them about from one place to another to give them suitable temperature. They are taken from room to room within the nest, farthest below the surface or up nearer the roof, or even out into the warm, sunshiny yard above ground, in order that they may be dry enough, or damp enough, or warmer or cooler, as desired. To be sure, there are granary chambers in the nests, which may not always be empty by the time winter arrives, but the primary purpose of these stores is to furnish the nurses with a supply of food for their hungry charges. So

"The frugal ants, whose millions would have end,
But they lay up for need a timely store,
And travail with the seasons evermore,"—Thomas Hood

which by autumn "have brimmed their garner with ripe grain," are acting more according to the poet's conception of what they ought to be doing than what the man of science knows to be the facts. I do not know if Browning is correct in the following observation, yet it might well be that swarms of these frugal foragers would find plenty where so careless a gleaner as man would find little, or nothing:

"Yet the hoard
Of the sagacious ant shows garnered grain
Ever abundant most when fields afford
Least pasturage."—Jochanan Hakkadosh.

Of course, not all species live the same. For instance, the nests vary greatly: some are galleries and chambers in the ground, others are in wood; some are mounds; others are made of a paste-like substance. The slave-making habits of some species, the extraordinary variety of the "guest" insects found in some formicaries, the cultivation of fungus as a device for having food at hand when needed, the attendance on and care of honey-dew secreting plant-lice, and, in fact, everything connected with ant economy and government offers most fascinating study, even to persons not especially interested in nature. The battles which take place between different tribes of ants have been noted again and again; so has the spring flight, or swarming, which is really the wedding tour of the queens and their husbands, the winged members of the colony.

One peculiar American genus is the honey ant, found in the far

West and at high elevations, such as in the Garden of the Gods, near Colorado Springs, and in California. The odd feature of these insects is that one caste of workers has the abdomen distended the size of a currant, and entirely filled with grape sugar, or "honey." The nest is a low, gravelly mound, tunnelled with passages and chambers, and the honey bearers are found clinging to the roofs, a few inches under the ground, motionless. They simply serve as cellars for the storing of the sweet substance collected by the active workers from the exudations of a gall found upon the dwarf oak. In times of famine, and in all seasons when the exudation is not forthcoming, these living pantry shelves regurgitate the honey, drop by drop, for the workers to eat. The abdomen of a well-filled honey bearer resembles a perfect globe of transparent skin, through which shines the yellow honey. On demand, a large drop of honey issues from the mouth of this honey pot, and this food is eagerly lapped from its lips by the hungry ones, two or three ants often feeding together on the same crop.

The harvesting, or agricultural ant, of Texas, has had a three-hundred-page book devoted to its life history. They live in large or small communities, in nests partly underground and partly heaped up in conspicuous mounds in open, sunny, grassy places. Into the nest they bring great stores of seeds and grains, gathered from the neighboring grasses, and their well-marked runways make distinct paths through the dense grass about the nest. The chaff and sprouted seeds are dropped at the edge of the cleared circle, often resulting in an unintentional planting, which gives the tribe its name.

"Ye busy, busy people of the wood,
When I behold you working every day
I marvel at the wisdom you display.
It seems but a questionable good
That such high instincts as you show us should
Be given you by nature to obey
When all they serve by all their wondrous play
Is to conserve the life of emmethood."
—J. G. Romane, "To the Ants of Texas."

Another interesting species is the yellow thief-ant, so small and obscurely colored that it seems to live in the nest of its host, some larger ant, practically unnoticed. These parasites live in plenty, for they feed almost exclusively on live larvæ of the host.

Then there are the slave-makers, found in different parts of North America. These ants attack the community of a smaller species of ants and carry off the long white larvæ, commonly called

"eggs." Some of these may be eaten, but the most are cared for and soon hatch to become the slaves of their captors. Adults are never enslaved—they are either killed or driven away. As in ancient Roman times, the slaves do the work of the community, and to such an extent that the slave-makers become very dependent upon them, and the community could not thrive without them. But all the fighting is done by the free masters, who, like the early Roman freemen, consider the warrior's calling too noble to be enjoyed by slaves.

"Little ants in leafy wood,
Bound by gentle brotherhood,
Ye are fraters in your hall,
Gay and chainless, great and small,
All are toilers in the field,
All are sharers in the yield."

—Edwin Markham, "Little Brothers of the Ground."

"Whole villages of sand-roofed tents.
That rise like golden domes
Above the cavernous and secret homes
Of wandering and nomadic tribes of ants."

—Longfellow, "To a Child."

H. W. D.

Montreal, Canada.

Book Reviews.

"Compendium Theologiae Moralis": A Joanne Petro Gury, S.J., Conscriptum et ab Antonio Ballerini, S.J. Adnotationibus auctum. Deinde vero ad brevior formam exaratum atque ad usum seminariorum hujus regionis accommodatum ab Aloysio Sabetti, S.J., in Collegio Woodstockiensi, Md.; Theologiae Moralis Olim Professore Editio Vicesima Septima ad Novum Codicem Iuris Canonici Cincinnati a Timotheo Barrett, S.J. Royal 8vo. 1227 pages. Bound in Library Buckram. \$4.50 net. New York: Fr. Pustet & Co.

This twenty-seventh edition of the popular Sabetti-Barrett Compendium of Moral Theology is not merely the reprint of a former edition with an additional supplement giving the changes made by the Codex Iuris Canonici. This new edition has been entirely recast, and in greater part rewritten, so that the numerous revisions and alterations rendered necessary by the new Code of Canon Law are embodied in the text, each in its proper place.

All quotations from the code are in heavy type, thus enabling the reader to recognize at once the exact wording of the canon, and enabling him to distinguish it from the text.

The meaning of the canons is in most instances so clear as to need no comment; however, where doubt could arise the required explanation has been given concisely and clearly.

In every paragraph principles are amply illustrated by modern cases, making their application extremely easy for the confessor, thus giving a working knowledge of the law.

The indices, three in number and extending over a hundred pages, have been thoroughly revised, and add much to the practical value of the volume. They enable the reader to find his way quickly and surely to the knowledge he is searching for.

The analytical index will be of great service to the student of Moral Theology. In the majority of cases it will solve his difficulties and render further search unnecessary.

In the index of canons, the reader is referred directly to all the canons of the New Code treated in the volume, thus giving him in the most practical way a knowledge of the New Code in this field.

The alphabetical index, exact and exhaustive, facilitates immediate reference by its citation of section and page. These indices are invaluable. They are exhaustive, clear and accurate.

One may with confidence depend upon this work for a safe interpretation of the provisions of the New Code, and this is a strong recommendation, especially when we remember the multiplicity of commentators.

No better advice could be given to priests and students than "Go to Sabetti." Procure all the standard moral authors if you will, study them if you can, reconcile them if you are able, but get Sabetti first, consult him before the others, and generally you will not have to go any further.

One who knew him well, and was taught by him, when asked what was his most striking characteristic, replied, "He answered questions." He did not merely accumulate and pile up authorities, leaving the student to dig his way out unaided, but he drew the conclusion himself, thus giving the inexperienced explorer a staff and a torch to help him on his way, and this is the most striking characteristic of the Sabetti-Barrett Moral Theology: it answers questions, it solves difficulties, it tells us what to do. How fortunate that the mantle of the master has fallen on the shoulders of so worthy a disciple!

"Pastor Halloft." *A Story of Clerical Life.* 12mo. 291 pp. New York: Longmans, Green & Co.

"The chapters in this book are true biography. They embody the principles and beliefs of a priest who carried them into action. Only the setting has been slightly altered from the original, in order to connect the incidents and give them consistency as a story. If the writer's sentiments have been at different periods interwoven with those of his hero, it is because he knew them to be part of the mind and heart of the friend whose intimate association he enjoyed for nearly forty years."

This book is not a story in the sense of fiction, nor is it biography in the strict sense because it does not pretend to be a complete or consecutive narrative. It is rather a bringing together of the leading episodes in the life of a young man who gave up the army and a secular career in the old country to take up the work of the ministry in the new. He was a priest of the Philadelphia diocese known quite well to the middle aged and older men of the diocese. He was a rugged, honest character, zealous and hard working, who for many years, especially in the formative period, acted as dean for foreign speaking priests, and in that capacity rendered excellent service to the diocese. The author has chosen him for his subject not because he did everything in the best way, nor because he made no mistakes, but rather because he was strong and earnest and had clearly defined views and firmly fixed principles which he tried to carry out and live up to.

Those who knew Father Halloft in the flesh, while conceding his sterling qualities as a priest, will be rather amused at the idealization. But we must remember that the revision even of the Second Nocturn is possible.

Pastor Halloft is fortunate in his biographer. Their long and intimate association united them very closely and begot in them mutual love and respect. Under such conditions the result must needs be excellent.

It is not likely that the younger clergy, who may be moved to emulate Pastor Halloft in piety and zeal, will also be tempted to adopt his methods on all occasions. This would not be wise, nor does the writer intend it. Methods must vary with the man, as well as with the times, and other circumstances. A weapon that may serve effectually as an instrument of offense or defense in the hands of one man may become a veritable boomerang in the hands of another.

"Canon Sheehan, of Doneraillle." By Herman J. Heuser, D.D., Overbrook Seminary. 8vo., pp. 405. New York: Longmans, Green & Co.

There is a natural curiosity among readers to meet their favorite authors. This desire is almost universal. It is very natural. The author introduces us to his friends, perhaps only the creatures of his imagination; he interests us in their affairs; he makes us weep with them in their sorrow and laugh with them in their joy. As our interest grows in them it also grows in him. We begin to wonder what manner of man he is who knows so many and such interesting people. Many questions arise about them that are not answered in the books, and perhaps if we could come into contact with him he would answer these questions for us. Then, too, the title of a story excites our curiosity, the occasion of it, the ultimate purpose of it, the origin of the characters that appear in it.

Sometimes we meet distinguished authors and we wish we hadn't. They are not the persons we thought they were at all. It might have been better if we had not met them, or if we had met them by proxy. And here the biographer makes his appearance. If he is a good biographer and a skillful one he can do for the author what perhaps he cannot do for himself. Moreover, comparatively few persons can hope to meet distinguished authors except through biographers. Among modern authors none has held a higher place among Catholic readers than Canon Sheehan. His pen is known universally and his readers are legion. Interest in him is as widespread as the knowledge of his books, and yet the number of persons who knew him personally compared to the number that read him was almost infinitesimal. And this was very natural. A pastor of a small parish in a country town in an out of a way part of Ireland, who spent his whole life among his people, would not come in contact with many persons from the outside world. His very isolation tended to increase interest in him and excite curiosity

about him. The announcement of his death aroused this interest anew, and therefore when it was announced that Dr. Heuser had become his literary heir and that he would draw his biographical portrait, the whole Catholic reading public rejoiced. Never was a subject more fortunate in the choice of a biographer. Dr. Heuser had really discovered Canon Sheehan. It is true that he had already brought out one or two stories and some essays, but his readers were few and he was hardly known outside his own immediate circle. But Dr. Heuser introduced him to the world, for his books have that human quality which imparts universal appeal to them, and the Ecclesiastical Review was the stage on which he really first made his public appearance.

From the time when they first began to correspond, their association was intimate and sympathetic. Dr. Heuser directed Canon Sheehan's mind into those channels from which his greatest triumphs flowed, and no one knew better than he the springs from which the clear streams of his genius took their rise. It is not surprising, then, that this biography should challenge comparison and defy competition. It has all the qualities that are essential to a good biography, and many that are seldom found. The result is a lifelike portrait, in which drawing, composition, coloring and perspective are all correct, in which the very soul of the subject is revealed, and which may truthfully be pronounced a speaking likeness.

"Sermons on Our Blessed Lady." By Rev. Thomas Flynn, C.C. New York: Benziger Brothers.

"This is a unified series of sermons built on the significance of Our Lady's festivals and showing her to be a 'house of gold,' both within and without, from her interior and exterior perfections and prerogatives, respectively. Part 1 contains a consecutive account of her life and part 2 of her titles and dignities, etc., making it, as it were, a complete 'Life and Character of the Blessed Virgin,' as far as we may reverently apply such to our Blessed Lady."

There are thirty-two of these sermons in all, each occupying about ten pages of the 12mo. volume. They show devotion, research and ability. They will serve equally well for preaching or spiritual reading. They can be preached effectually and with profit by any preacher to any congregation.

"The Principles of Christian Apologetics. An Exposition of the Intellectual Basis of the Christian Religion." Specially written for senior students. By Rev. T. J. Walshe. 12mo., pp. 252. New York: Longmans, Green & Co.

"The study of the science of apologetics is very necessary in these days of doubt and agnosticism. The fundamental principles which underlie all religious belief are daily called in question. And

even if the urgent need of a reasonable grasp of the foundation of faith did not exist, the interest of the subject of apologetics, the large outlook upon life which it involves, the coherence of its parts and the cogency of its conclusions make it desirable that an examination into the principles of Theism should be an indispensable adjunct to Christian teaching."

The author informs us that he has followed in the more formal and scholastic portions of their works Père Garrigon-Lagrange in his "*Dieu son existence et sa Nature*" and M. Le Chanoine Valvèrens in his "*Foi et Raison*," although he did not hesitate to adopt other treatment whenever it seemed preferable.

The author follows the usual order, and while the book is comprehensive it is necessarily brief. This does not, however, detract from its clarity. Everything is put clearly and in the simplest language compatible with the subject. The whole subject is brought easily within the comprehension of those for whom it has been specially treated, namely, senior students.

The Bibliography and the Index add much to its value.

"Marriage Legislation in the New Code of Canon Law." By Very Rev. H. A. Ayrinhac, S.S., D.D., D.C.L., president of St. Patrick's Seminary, Menlo Park, Cal.; professor of moral theology, pastoral theology and canon law.

It is probably true that no part of the New Code will be more frequently quoted in practice than the section which deals with matrimony. For that reason no part calls so urgently for prompt and safe commend. And while it is true that more than one commentator is already engaged on the Code as a whole, and that decisions of the Roman congregations will modify the law in some respects, it is also true that the finest in active practice must be ready in the meantime to apply it at once to all those cases that come before him. The changes in matrimonial legislation, although not very numerous, are of real practical importance, and in spite of the efforts of the legislator to make everything clear, the interpretation and application of a new law, civil or ecclesiastical, is proverbially difficult.

It is a matter of congratulation that one so well fitted as Dr. Ayrinhac should take up the work. His years of study in Rome under the best masters, his experience as a teacher for twenty-five years, and his practice as *Defensor Vinculi* in a large diocese furnish him with an equipment that is enviable. In the plan followed the text is given in Latin and in English. In the explanations stress is laid on the historical development of the legislation to show the continuity of the Church's discipline under accidental changes, and also to show the difference between the old law and the new. The

author's explanations really explain, for he has the happy faculty of stating things clearly.

"St. Rita." By Rev. M. J. Corcoran, O.S.A. 12mo., pp. 187; illustrated. New York: Benziger Brothers.

A few years ago a life of St. Rita would not have attracted much attention; now it excites a great deal of interest. Although this saint was born in Umbria, Italy, in the year 1381 and died in 1457 at the age of 76, and although devotion to her was always practiced by the works and nuns of St. Augustine, she was not beatified until 175 years after her death, nor canonized until 1900, four and a half centuries after her birth. Devotion to her began to spread only after her canonization, but it has spread very rapidly, nor is it confined to any country or shrine. Like St. Jane Chantel, she was both wife and mother before she became the spouse of Christ. She was of humble origin, uneducated, untraveled and unknown. But her sanctity was very great, and God showed his approval of her life by afflicting her with heavy crosses and working wonders in answer to her prayers when she was living as well as since her death. Her body has been perfectly preserved throughout the centuries, and it exhales a sweet odor which at the time of her canonization was declared miraculous.

The volume before us, which was inspired by the recent life of the saint in Italian by Marabottim, is very charming. While setting forth the main facts faithfully, there is a loving unction about it that begets devotion. The devout followers of St. Rita, and their name is legion, will welcome it joyfully. It will make her known to many who have not yet learned to love her, and it will bring to her feet in ever-increasing numbers faithful devotees and pious suppliants.

"Sacerdotal Safeguards: Casual Readings for Rectors and Curates." By Arthur Barry O'Neill, C.S.C., LL.D. Notre Dame: University Press.

Father O'Neill places the responsibility for his third volume of clerical essays on the readers of the former volumes, who liked them so well that they asked for more. No one who reads this third volume will be inclined to shirk the responsibility. There is certainly a field for such essays, and Father O'Neill is as certainly the man to till that field. Some philosopher has truthfully said that the efficient teacher does not drive the pupil before him, but he takes him with him. Father O'Neill has this happy faculty. He

tells us something we want to know, he helps us to know it, he instructs without preaching and he corrects without hurting.

This volume contains fourteen essays, beginning with "American Priests and Foreign Missions," and ending with "A Priestly Knight of Mary." In between we have such subjects as "The Priest and the School," "The Priest's Table," "The Priest's Housekeeper," "The Priest and Non-Catholics," etc. There is one humorous chapter called "Rubrical Odds and Ends" (Queries at a Conference). We do not know if it was intended to be funny, but in it everybody seems to think he knows everything, but nobody knows anything. Those who have the other volumes of clerical essays will want this one, and those who get this will want the others.

"Whose Name is Legion." A Novel by Isabel C. Clarke. 12mo., pp. 350. New York: Benziger Brothers.

Miss Clarke's latest story is especially timely because it deals with spiritism and brings out the teaching of the Church on the subject. For some time spiritism has been making rapid progress. This is due to several causes. The first and perhaps most fundamental is the groping after knowledge concerning the future life by those who have not the true faith nor the guidance of the true infallible church of Christ. This yearning for information concerning the life to come and the state of those who have already entered into that life is universal. Another cause of the spread of spiritism is the number of prominent persons, including many men of learning, who are writing much on the subject. Persons of less prominence and ability who are not able to study the subject themselves and have no guide whom they trust are apt to follow such leaders.

Then there is the great body of frauds who in every age and every clime prey upon the credulity of the innocent, the ignorant and the superstitious. There is reason to believe their number is very large.

Finally, the evil spirits are at work to deceive men and lead them away from that faith without which it is impossible to please God, and from the works which that faith must produce in order to live. Their name is legion and their labors indefatigable. They never sleep; they ever strive. The times are propitious for the spread of the evil. After every great calamity, such as shipwreck, pestilence and war, men yearn more hungrily for knowledge of the great future into which they see relatives and friends going in such large number, and they try harder to penetrate the veil that separates time from eternity. If they have no knowledge of the only true

means to be used for this purpose, or if they are unwilling to adopt the true means, they will turn to the false, the doubtful, the fraudulent and the vicious.

Into this field Miss Clarke enters boldly and with sure touch. The scene of the first part of the story is laid in rural England, with all its charms, and the principal characters assemble on one of the old estates for which the country is famous, and which are so well suited for staging such scenes. We are glad that the author introduces her characters to us in the old-fashioned way, by describing them. There is a tendency recently to leave the personal appearance of characters in fiction to the imagination of the reader, which is supposed to make a mental picture from their words and actions. But it is rather unsatisfactory, for sometimes after the picture is complete we fail to recognize the person it is supposed to represent.

The week-end party to which we are invited brings together an interesting group, including a professional spiritist with some of his disciples, holding seances under the patronage of the hostess, who has been prevented from becoming a Catholic by a warning received from her dead husband, who was a devout Catholic, telling her through a medium not to accept that faith, and adding that his salvation depended on her refusal of it. Her stepson, also a devout Catholic, has brought a Jesuit priest, who is his guardian, to the party, and this gives occasion to show the conflict between Catholicity and spiritism. The description of a seance is very vivid and startling.

The scene then changes to Algiers, in Africa, where the heroine has taken up residence after her marriage. Here the mystery created by the revelations made at the seance unfolds itself and is finally explained.

Altogether an unusual, well-told, absorbing tale. By no means an idle tale, because it instructs while it entertains.

"The Hills of Desire," By Richard Aumerle Maher, author of the "Shepherd of the North," etc. 12 mo., pp. 257. New York: The Macmillan Co.

We venture to say here is the author's best story. If any one should ask us why, perhaps we could not tell. We might say, because he did not try to write, it seems so spontaneous; or because it is so human—the leading characters might travel around the world and they would be recognized everywhere; or because we want to meet them, and know them, and help them, as everybody else did.

Whatever the reason may be, sunshine and shadow, success and failure, laughter and tears, are so skillfully mixed in this book that

the reader will find it hard to tear himself away from it until he has reached the happy end.

And yet it all turns on the life and adventures of a man, a woman, and a horse. Very quiet adventures they are, and hardly worthy of the name, but you cannot help being interested and following them to the end. It reminds one a good deal of Dickens. Indeed, Jimmie and Augusta and Donahue might have been taken from his pages.

Jimmie is the New York reporter and contributor to the funny columns who had a long story on the way for a long time, and who finally brings forth a best seller, but not until after he has regained his health in the Adirondacks. Augusta is the sweet little woman, hardly more than a child in the beginning, who marries Jimmie and sticks to him through thick and thin, until as a war nurse she saves his life when he lies wounded and helpless in a hospital that is shelled by the enemy, after Jimmie and she have been separated through a misunderstanding. Donahue is the old horse that they bought from some traveling gypsies, and that brings them by easy stages, very easy, to the Hills of Desire. Could anything be simpler? And yet there is the net result—a charming story in which humor and pathos are so nicely balanced as to be simply irresistible.

"The Barrier." By Rene Bazin, author of "The Nun," etc. 12 mo., pp. 218. New York: Benziger Brothers.

A very pretty story, with England and France for a background. Stories of French life have a certain distinctive charm, because French authors give more attention to the smaller things, such as dress, manner, mode of life and character of thought, which enable us to get nearer to the actors and understand them better. After all, men differ in accidentals rather than essentials. In general they have the same ambitions, the same passions; they love and hate, and seek pleasures, honors and riches with the same insatiable thirst. Some of them, a few, seek the kingdom of business first; others, a larger number, seek it after other things; but the largest number seek it not at all. In accidental things they differ.

The English reader is always amused with the peculiar ways of the French. They seem to give so much attention to small things, and attach so much importance to forms. For that reason probably there is less of substance in the French story; a simple incident, which might be disposed of in a page or two, is drawn out into a chapter by an abundance of detail.

In "The Barrier" the theme is the priceless pearl of the true faith. We read how a young Frenchman sacrificed it for other things and then lost that which his heart most desired—the love of

a good woman. Opposite to him we have the young Englishman, who sacrifices everything for the true faith, and incidentally wins that love which the other has lost. The strongest chapter in the book is that in which the Frenchman blames his parents for his infidelity, because, although they followed forms and taught him to do so, they did not teach him the necessity for works, practice and sacrifice, which are essential to faith.

It is a very pretty story, charmingly told, and adds much to the author's reputation, already very high.

"Studies in Sociology: Background for Social Workers." By Edward J. Menge, M.A., Ph.D., professor of biology, Dallas University. 12mo., pp. 214.

"Studies in Science: The Beginning of Science, Biologically and Psychologically Considered." By Professor Menge. 12mo., pp. 256. Boston: Richard G. Badger, The Gorham Press.

Two excellent manuals in important fields. As to the former the author says:

"This book is written for everyone possessing any interest whatever in world-betterment. It not only discusses such historic subjects as 'Marriage' and the 'Family' but such modern problems as 'Birth-Control,' 'Sex Hygiene,' 'Sterilization of the Insane, Feeble-Minded and Criminals,' 'Eugenics,' the 'Training of Children,' and gives the underlying reasons for 'Right and Wrong,' and tells how to find whether a given act belongs in one field or the other, aside from all creeds and sects. It shows on what basis morality rests and makes an intelligent discussion of these things possible."

And the book does all that it promises in a clear, interesting and orthodox manner. The discussion of these subjects by persons not fitted to handle them by education, religion or training is working havoc in every community. The introduction of them in attractive and insidious form into the novel, the play and the picture is spreading the poison far and wide.

This book is a splendid antidote. The author handles these questions in a scholarly yet simple manner and with a delicacy that is commendable and edifying.

The "Beginning of Science" presents in understandable language the many subjects that are constantly discussed in journals and books exclusively for specialists. It tells what is known about such subjects as Life; Mind; How children learn and the best methods to use in bringing out desired results; What evolutionary theories are now accepted and why; What difference it makes to the world at large as to which are accepted; Who are authorities and who are not; What laboratory work means and how the psychological labora-

tories are drawing men in the various fields of science closer together; and many other subjects equally important.

This book is written not for professional men and women only, but for parents and students also.

The author gives both sides when there is a difference of opinion; he lays special stress on the difference between facts and interpretations; he calls attention to the deplorable lack of logical and philosophical thinking among writers on Evolutionary Sciences; and to the fallacy of permitting the student to assume that because an hypothesis is necessary for experimental purposes it must be true.

In other words, the object and aim of the author has been to show what is necessary for a broad, logical and clear-cut view of life; what theories are held by able men in all the various walks of life; where and how they agree, and where and how they do not agree. The bibliography in the chapter on "Suggested Readings" is especially full and satisfying.

"The Most Beloved Woman: The Prerogatives and Glories of the Blessed Mother of God." By Rev. Edward F. Garesche, S. J. 12 mo., pp. 155.

"Your Neighbor and You: Our Dealings with Those About Us." By Rev. Edward F. Garesche, S. J. 12 mo., pp. 215. New York: Benziger Brothers.

The papers in the former volume are not meant to be a complete systematic treatise on the Blessed Virgin. Rather they are pious meditations on certain of the prerogatives and glories of the Mother of God, first published from month to month in the "Queen's Work," and now gathered together in permanent form.

The eagerness with which the readers of the "Queen's Work" watched for them and the joy with which they received them fully warrant the belief that they will be welcomed in this new form. So much indifferent and even evil reading is done because it can be had so cheaply, so conveniently and in such attractive form. If good, wholesome reading can compete with that which is evil, it ought to be possible to prevent the immense harm which is being done by this insidious poison, so skillfully disguised.

In the latter volume we have a collection of short essays on a variety of subjects, which have already appeared in the "Messenger of the Sacred Heart" and other Catholic magazines. The title is rather wide and is not to be taken in the literal sense of dealing with the duty of man towards his neighbor.

Father Garesche is fortunate in having his remains gathered together before his death and under his own direction. Most authors must trust to others to do this work after they are gone and they have no voice as to what shall be preserved. Both methods have their advantages.

